



A descriptive analysis of enrollment and achievement among English language learner students in Delaware















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**April 2012** 

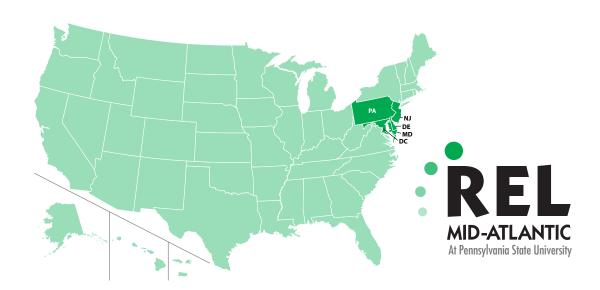
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### April 2012

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Summary REL 2012–No. 132

# A descriptive analysis of enrollment and achievement among English language learner students in Delaware

This study describes enrollment and achievement trends among English language learner (ELL) students in Delaware public schools between 2002/03 and 2008/09. It documents achievement gaps in reading, math, science, and social studies that narrowed in most elementary and middle school grades studied and were wider at higher grades in all subjects.

English language learner (ELL) students are the fastest growing segment of the U.S. student population. According to the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (2011), approximately 5.3 million ELL students were enrolled in preK-12 in 2008/09, accounting for about 10.8 percent of all public school students in the United States. National enrollment of ELL students in public schools grew 57 percent between 1995 and 2009 (Flannery 2009)—almost six times the 10 percent growth rate in the general education population (students who are not enrolled in a language assistance program or a special education program). The number of ELL students has also been growing in Delaware,1 where the foreign-born population rose from 44,898 in 2000 to 74,033 in 2009, making up more than 8 percent of the state's population in 2009 (Migration Policy Institute 2010b).

Nationally, an achievement gap exists between ELL and non-ELL students in all subject areas, particularly subjects with high language demands (Strickland and Alvermann 2004). On state assessments, the percentage of students who achieve proficiency (as defined by each state) is 20–30 percentage points lower among ELL students than among non-ELL students (Abedi and Dietel 2004). The No Child Left Behind Act of 2001 requires states to implement accountability systems to assess the achievement of all students, including students from traditionally underserved populations such as ELL students. The goal is to have all students reach proficiency and to close the achievement gap by 2014 (No Child Left Behind Act of 2001).

This study describes ELL student enrollment and achievement trends in Delaware public schools from 2002/03 to 2008/09. Two research questions guide this study:<sup>2</sup>

- How did the enrollment of ELL students in Delaware public schools change between 2002/03 and 2008/09?
- How did performance (the percentage scoring at the meets the standard, exceeds the standard, or distinguished level) on state assessments in reading and math in grades 2–10 and in science and social

studies in grades 4, 6, 8, and 11 compare between ELL and non-ELL students in Delaware public schools from 2002/03 to 2008/09?

To report changes in ELL student enrollment and performance, the study uses enrollment and assessment data available through the Delaware Department of Education website. The descriptive analyses of enrollment data track the number of ELL students statewide, ELL enrollment by grade level, and ELL enrollment by English language proficiency level, as well as the languages spoken by the highest number of ELL students statewide. The analyses of performance data present the percentage of ELL and non-ELL students who scored at the meets the standard, exceeds the standard, or distinguished level in reading, math, science, and social studies on the Delaware Student Testing Program.<sup>3</sup>

The study's main findings include:

### On enrollment trends:

- Between 2002/03 and 2008/09, ELL student enrollment in Delaware public schools rose 91.7 percent, while total enrollment rose 7.7 percent. ELL student enrollment rose from 3.0 percent of the total student population in 2002/03 to 5.4 percent in 2008/09.
- Between 2002/03 and 2008/09, ELL students accounted for a larger share of total enrollment in elementary school (grades K–5) than in middle school (grades 6–8) and high school (grades 9–12). In 2008/09, ELL students accounted for 8.6 percent of the elementary school population,

- 3.3 percent of the middle school population, and 2.2 percent of the high school population.
- The percentage of ELL students classified in the three lowest levels of English proficiency dropped from 73.4 percent in 2005/06 to 48.1 percent in 2008/09.
- ELL students in Delaware spoke 81 languages in 2008/09, up from 60 in 2002/03. In 2008/09, Spanish (spoken by 77.2 percent of ELL students in the state) had the most speakers, followed by Creole (4.2 percent), Chinese (2.0 percent), and Gujarati (1.5 percent). ELL students speaking "other" languages (languages other than the 12 most common in the state) accounted for 7.2 percent of the ELL student population in 2008/09.
- The number and percentage of ELL students speaking Spanish, Gujarati, and "other" languages increased between 2002/03 and 2008/09. During this period, the number of ELL students speaking Creole and Chinese increased, but the percentage decreased.

### On achievement trends:

- Between 2005/06 and 2008/09, ELL students' performance in reading increased 6.6–37.5 percentage points in grades 3–10 but decreased 1.2 percentage points in grade 2.
- Between 2005/06 and 2008/09, ELL students' performance in math increased 2.9–32.4 percentage points in grades 3–9

- but decreased 3.4–3.7 percentage points in grades 2 and 10.
- Between 2002/03 and 2008/09, ELL students' performance in science increased 4.7–18.1 percentage points in all grades studied (grades 4, 6, 8, and 11).
- Between 2002/03 and 2008/09, ELL students' performance in social studies increased 11.5–27.6 percentage points in grades 4, 6, and 8 but decreased 5.6 percentage points in grade 11.
- Between 2002/03 and 2008/09, non-ELL students' performance in science and social studies was higher than that of ELL students in all grades. Between 2005/06 and 2008/09, non-ELL students' performance in reading and math was higher than that of ELL students in all grades except in grade 2 reading and math in 2005/06, grade 3 reading in 2006/07 and 2008/09, and grade 3 math in 2008/09.
- non-ELL students' performance in reading and math was closer in elementary school (grades 2–5) than in middle school (grades 6–8) and high school (grades 9–10). During this period, the achievement gap in reading between ELL and non-ELL students widened in grade 2, narrowed in grades 4–10, and reversed in grade 3, and the achievement gap in math widened in grades 2, 9, and 10, reversed in grade 3, and narrowed in grades 4–8.

• Between 2002/03 and 2008/09, ELL and non-ELL students' performance in science and social studies was closer in elementary school than in middle school and high school. During this period, the achievement gap in science between ELL and non-ELL students narrowed in grades 4 and 6 and widened in grades 8 and 11, and the achievement gap in social studies narrowed in grades 4, 6, and 8 and widened in grade 11.

### Notes

- 1. The Delaware Department of Education defines ELL students as "students with limited English proficiency . . . who, by reason of foreign birth or ancestry, speak a language other than English, and either comprehend, speak, read, or write little or no English, or who have been identified as English Language Learners by a valid English language proficiency assessment approved by the Department of Education for use statewide" (State of Delaware 2010).
- 2. This report is one in a series for jurisdictions in the Mid-Atlantic Region (which also includes the District of Columbia, Maryland, New Jersey, and Pennsylvania). The findings are presented in separate reports because each jurisdiction has different ELL student policies and definitions, and so it may be inappropriate to compare ELL student enrollment and achievement across jurisdictions. The available data also varied by jurisdiction.
- 3. Delaware uses five levels to describe student achievement on the state assessments: well below the standard, below the standard, meets the standard, exceeds the standard, and distinguished. Scoring at the meets the standard, exceeds the standard, or distinguished level indicates academic proficiency. Further details of the achievement categories are supplied in the main report and its appendices.

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This study describes enrollment and achievement trends among English language learner (ELL) students in Delaware public schools between 2002/03 and 2008/09. It documents achievement gaps in reading, math, science, and social studies that narrowed in most elementary and middle school grades studied and were wider at higher grades in all subjects.

### **WHY THIS STUDY?**

English language learner (ELL) students<sup>1</sup> are the fastest growing segment of the student population enrolled in public schools in the United States, including in Delaware. This study describes enrollment and achievement trends among ELL students in Delaware public schools from 2002/03 to 2008/09. (Box 1 defines key terms.)

### National increase in the number of ELL students

According to the National Clearinghouse for English Language Acquisition and Language Instruction Educational Programs (2011), approximately 5.3 million ELL students were enrolled in preK–12 in 2008/09, accounting for about 10.8 percent of all public school students in the United States. National enrollment of ELL students in public schools grew 57 percent between 1995 and 2009 (Flannery 2009)—almost six times the 10 percent growth rate in the general education population (students who are not enrolled in a language assistance program or a special education program).

In the 1990s, the majority of ELL students were concentrated in a few states, including California, Florida, and Texas. Since then, the number of ELL students across the country has risen, with increasing diversity in the languages they speak (Shin and Bruno 2003; Shin and Kominski 2010). The growth in the number of ELL students reflects the growth in the number of foreign-born residents in the United States (Migration Policy Institute 2010a). According to the Migration Policy Institute (2010a), about 39 million foreign-born residents lived in the United States in 2009, accounting for 12.5 percent of the population. The number of foreign-born residents who obtained permanent legal resident status rose from roughly 841,000 in 2000 to 1,131,000 in 2009, an increase of about 35 percent (U.S. Department of Homeland Security 2010).

The achievement gap between ELL and non-ELL students

Nationally, an achievement gap exists between ELL and non-ELL students (Strickland and

### BOX 1 **Key terms**

Achievement gap. The difference between how well students from minority subgroups, including English language learner (ELL) students and low-income households, perform on standardized tests as compared with their peers (No Child Left Behind Glossary 2001). In this report, the achievement gap is calculated by subtracting the percentage of ELL students at a specific grade level scoring at the meets the standard, exceeds the standard, or distinguished level on a state assessment from the percentage of non-ELL students at the same grade level scoring at the meets the standard, exceeds the standard, or distinguished level on the same assessment. Narrowing the achievement gap is when the difference between the percentage of ELL students scoring at meets the standard, exceeds the standard, or distinguished level and the percentage of non-ELL students scoring at the meets the standard, exceeds the standard, or distinguished level decreases over time. Closing the

achievement gap is when the difference between the percentage of ELL students scoring at the meets the standard, exceeds the standard, or distinguished level and the percentage of non-ELL students scoring at the meets the standard, exceeds the standard, or distinguished level becomes zero. Reversing the achievement gap is when the percentage of ELL students scoring at the meets the standard, exceeds the standard, or distinguished level changes from being lower than to higher than the percentage of non-ELL students scoring at the meets the standard, exceeds the standard, or distinguished level.

English language learner (ELL) students. According to the Delaware Department of Education (State of Delaware 2010), "students with limited English proficiency. ELLs are individuals who, by reason of foreign birth or ancestry, speak a language other than English, and either comprehend, speak, read, or write little or no English, or who have been identified as English Language Learners by a valid English language

proficiency assessment approved by the Department of Education for use statewide."

Foreign born. Anyone residing in the United States who was not a U.S. citizen at birth, including naturalized citizens, lawful permanent residents, certain legal nonimmigrants (for example, people on student or work visas), people admitted under refugee or asylee status, and people illegally residing in the United States (Migration Policy Institute 2010a).

Non–English language learner (non-ELL) students. Native speakers of English, those who speak a language other than English at home but are identified as initially fluent speakers of English, and those who were ELL students but have been reclassified as fluent English proficient (Abedi 2004).

Performance. In this study, a term used as shorthand for the percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the Delaware Student Testing Program.

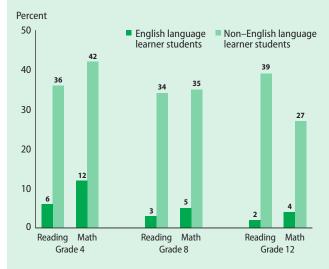
Alvermann 2004). On state assessments, the percentage of students who achieve proficiency (as defined by each state) is 20–30 percentage points lower among ELL students than among non-ELL students (Abedi and Dietel 2004). Studies using nationally representative assessment data clearly and consistently show a large achievement gap between ELL and non-ELL students in all subject areas (Abedi and Gándara 2006; Solano-Flores and Trumbull 2003; Wolf et al. 2008).

Recent scores on the National Assessment of Educational Progress (NAEP) illustrate this achievement gap between ELL and non-ELL students in

reading and math at all grades tested (figure 1; U.S. Department of Education 2010). On the 2009 NAEP reading assessment, the achievement gap between ELL and non-ELL students was 30 percentage points in grade 4, 31 percentage points in grade 8, and 37 percentage points in grade 12. On the 2009 NAEP math assessment, the achievement gap was 30 percentage points in grades 4 and 8 and 23 percentage points in grade 12.

Other studies have illustrated the widening achievement gap in reading/language arts and math between ELL and non-ELL students at higher grades. National studies using 2005 NAEP

# Percentage of students scoring at or above the proficient level on the 2009 National Assessment of Educational Progress, by grade, subject, and English language learner status



*Source:* Authors' analysis based on data from U.S. Department of Education (2010).

math data (Fry 2007) and Stanford 9 reading data (Abedi 2002) found wider gaps between ELL and non-ELL students in middle and high school than in elementary school. State data yielded similar results: 2001 Stanford 9 reading data for California (Gándara et al. 2003) and 2010 New England Common Assessment Program reading data for Rhode Island (Rhode Island KIDS COUNT 2011). A state-level cohort analysis of a group of California students from 1998 to 2001 found that ELL students' assessment scores tended to be comparable to non-ELL students' scores in the early elementary school grades but fell below non-ELL students' scores by grade 5, and the gap continued to widen throughout the students' school careers (Gándara et al. 2003).

One possible explanation for the change in the achievement gap across grades outlined in the research literature is that the language demand of the assessments increases as grade levels rise. According to the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, and National Council on

Measurement in Education 1999, p. 91), "for all test takers, any test that employs language is, in part, a measure of their language skills. This is of particular concern for test takers whose first language is not the language of the test." The language demands of national and state assessments may affect the academic performance of ELL students with low English proficiency. Thus, these assessments inadvertently become measures of English language proficiency in addition to being measures of content area knowledge and skills.

The achievement gap between ELL and non-ELL students reported in the literature is wider in reading/language arts, which has high language demand, than in subjects such as science and math, where language is not the target of measurement (Abedi 2002; Abedi and Herman 2010). In a study using data from several school districts in different states, Abedi, Leon, and Mirocha (2003) found that the achievement gap between ELL and non-ELL students is widest in reading, substantially narrower in science, and nonexistent in math items involving computations (but not in math items involving the use of language, such as word problems).

### Legislation affecting the assessment of ELL students

Closing the achievement gap between subgroups such as ELL and non-ELL students is a critical step toward achieving the No Child Left Behind (NCLB) Act of 2001 goal of having all students achieve proficiency in reading and math by 2014. The law requires states to implement accountability systems to assess the achievement of all students, including traditionally underserved populations such as ELL students. Under Title I of NCLB, all students, including ELL students, must be tested annually in grades 3-8 and once in high school, and states must provide ELL students with appropriate accommodations, including modifications of the assessment language and format, until the students achieve English language proficiency. Because ELL students are still developing English language skills, state assessments in a student's

non-native language may introduce language that is too complex for them to understand. In such cases, accommodations may be made during the assessment to minimize the impact of complex language without giving ELL students an unfair advantage over students who do not receive accommodations (Abedi 2001).

### Regional need for this study

Policymakers in the Mid-Atlantic Region expressed an interest in knowing more about the trends in ELL student enrollment and achievement. In 2009, the Pennsylvania Department of Education made a request to Regional Educational Laboratory (REL) Mid-Atlantic for a "comprehensive demographic analysis of the state's ELL population," including "typical growth trends for this group by language, etc." Also requested was "an analysis on various achievement indicators for ELL students." REL Mid-Atlantic shared this request and its proposed data analysis with other state education agency representatives in the region, which also includes Delaware, the District of

Columbia, Maryland, and New Jersey. The associate secretary of curriculum and instructional support in Delaware indicated that a similar analysis and report would be valuable to her state.

### Research questions

The study addresses two research questions:

- How did the enrollment of ELL students in Delaware public schools change between 2002/03 and 2008/09?
- How did performance (the percentage scoring at the meets the standard, exceeds the standard, or distinguished level) on state assessments in reading and math in grades 2–10 and in science and social studies in grades 4, 6, 8, and 11 compare between ELL and non-ELL students in Delaware public schools from 2002/03 to 2008/09?

The study data are described in box 2 and in greater detail in appendix A.

### BOX 2

### Data sources

This study draws from student enrollment and assessment data in Delaware. Both sets of data include all public school students in Delaware in grades K–12 (regular and charter schools); students from nonpublic private or parochial schools are not included.

Enrollment data are from English language learner reports on the Delaware Department of Education website (number of ELL students enrolled in the state, total and by grade; English language proficiency levels of ELL students; the languages spoken by ELL students in the state; and

the languages spoken by the highest number of ELL students statewide). The 2002/03 school year was selected as the base year because it is the first year that states were required to disaggregate and report data on traditionally underserved populations under the No Child Left Behind Act of 2001. The 2008/09 school year was the most recent year for which data were available.

State assessment data were used to track ELL and non-ELL students' achievement in reading, math, science, and social studies. These data —from the Delaware Student Testing Program (DSTP)—show changes in achievement for both groups of students.

The DSTP reading and math data span 2005/06-2008/09, and the DSTP science and social studies data span 2002/03-2008/09. The DSTP in reading and math for grades 3, 5, 8, and 10 adopted new score ranges in 2005/06, so results for 2005/06 onward are not comparable to results prior to 2005/06. The reading and math assessments were administered in grades 2, 4, 6, 7, and 9 for the first time in 2005/06; thus, 2005/06 was selected as the base year for reading and math achievement. The DSTP in science and social studies is administered in grades 4, 6, 8, and 11 only but did not change during the period studied; thus, 2002/03 was selected as the base year for science and social studies achievement.

### TRENDS IN ENROLLMENT OF ELL STUDENTS

The number of ELL students in Delaware increased 91.7 percent from 2002/03 to 2008/09, but the changes were not consistent over time (table 1). ELL student enrollment increased steadily every year from 2002/03 to 2007/08, with the largest increases from 2002/03 to 2003/04 (20.7 percent) and from 2004/05 to 2005/06 (20.4 percent).<sup>3</sup> ELL student enrollment decreased 1.2 percent from 2007/08 to 2008/09. The percentage of ELL students in the student population increased from 3.0 percent in 2002/03 to 5.5 percent in 2006/07 and remained close to that level through 2008/09. Total enrollment increased 7.7 percent from 2002/03 to 2008/09.

Between 2002/03 and 2008/09, ELL students accounted for a larger share of total enrollment in elementary school than in middle school and high

school (table 2). During that period, ELL student enrollment grew in every grade except prekindergarten, where ELL student enrollment peaked in 2004/05. The growth in elementary school outpaced the growth in middle school and high school: ELL students accounted for 4.3 percent of the elementary school population in 2002/03 and 8.6 percent in 2008/09, whereas they accounted for 2.3 percent of the middle school population in 2002/03 and 3.3 percent in 2008/09 and for 1.8 percent of the high school population in 2002/03 and 2.2 percent in 2008/09. Appendix B contains more information on ELL student enrollment by grade.

The Delaware Department of Education requires that an English language proficiency assessment be administered to all ELL students every year. The assessment is administered in the spring and measures ELL students' levels of English proficiency (State of

TABLE 1

Total and ELL student enrollment in Delaware public schools, 2002/03–2008/09

	Total	l enrollment	ELL student enrollment					
Year	Number	Percentage change from the previous year	Number	Percent change from the previous year	Percent of total enrollment			
2002/03	116,444	na	3,523	na	3.0			
2003/04	117,777	1.1	4,254	20.7	3.6			
2004/05	119,108	1.1	4,771	12.2	4.0			
2005/06	120,938	1.5	5,743	20.4	4.7			
2006/07	122,261	1.1	6,748	17.5	5.5			
2007/08	124,041	1.5	6,831	1.2	5.5			
2008/09	125,430	1.1	6,752	-1.2	5.4			

na is not applicable.

Source: Authors' analysis based on data from Delaware Department of Education (2009b).

TABLE 2

ELL student enrollment as a share of total enrollment in Delaware public schools, by grade span, 2002/03–2008/09

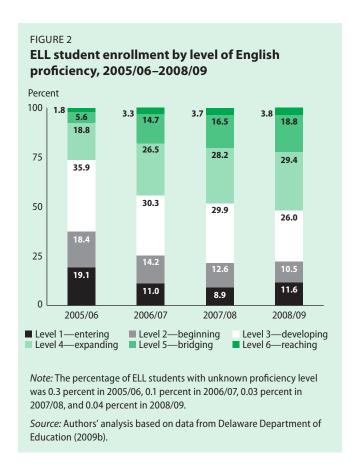
Grade span	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Prekindergarten	1.2	1.7	3.4	1.3	1.2	0.0	0.4
Elementary (grades K–5)	4.3	5.5	6.0	7.3	8.8	8.8	8.6
Middle (grades 6–8)	2.3	2.4	2.7	3.0	3.2	3.3	3.3
High (grades 9–12)	1.8	1.9	2.1	2.5	2.6	2.5	2.2

Delaware 2010). Beginning in 2005/06, the Delaware Department of Education adopted Assessing Comprehension and Communication in English State-to-State for English Language Learners® (ACCESS for ELLs) as its English language proficiency test. ACCESS for ELLs measures ELL students' social and academic English language proficiency in the four language domains: listening, speaking, reading, and writing. Six levels are used to identify the progression of language skills on the path to English language proficiency. The levels include:

- Level 1—entering: the student knows and uses minimal social language and minimal academic language with visual support.
- Level 2—beginning: the student knows and uses some social English and general academic language with visual support.
- Level 3—developing: the student knows and uses social English and some specific academic language with visual support.
- Level 4—expanding: the student knows and uses social English and some technical academic language.
- Level 5—bridging: the student knows and uses social and academic language working with grade level material.
- Level 6—reaching: the student knows and uses social and academic language at the highest level measured by this test (World-Class Instructional Design and Assessment Consortium 2011).

For students in grades 1–12, a proficiency level of 5 or 6 is required to exit a language assistance program.

The percentage of ELL students in Delaware at level 1, 2, or 3 dropped from 73.4 percent in 2005/06 to 55.5 percent in 2006/07 and to 48.1 percent in 2008/09 (figure 2). From 2005/06 to 2008/09, the percentage of students at level 4, 5, or 6 rose: the percentage at level 4 rose



10.6 percentage points, from 18.8 percent in 2005/06 to 29.4 percent in 2008/09; the percentage at level 5 rose 13.2 percentage points, from 5.6 percent in 2005/06 to 18.8 percent in 2008/09; and the percentage at level 6 more than doubled, from 1.8 percent in 2005/06 to 3.7 percent in 2008/09.

The number of languages spoken by ELL students increased from 60 in 2002/03 to 81 in 2008/09, with the largest increase from 2002/03 to 2003/04 (15.0 percent) and from 2007/08 to 2008/09 (22.7 percent; table 3).<sup>5</sup>

From 2002/03 to 2008/09, Spanish speakers accounted for the largest percentage of ELL students, peaking at 77.5 percent in 2006/07 (table 4). In 2008/09, Spanish (spoken by 77.2 percent of ELL students in the state) had the most speakers, followed by Creole (4.2 percent), Chinese (2.0 percent), and Gujarati (1.5 percent). ELL students speaking "other" languages (languages other than the 12 most common in the state) accounted for 7.2 percent of the ELL population in 2008/09.

TABLE 3

Number of native languages spoken by ELL students in Delaware public schools, 2002/03–2008/09

Year	Number of languages	Percent change from the previous year
2002/03	60	na
2003/04	69	15.0
2004/05	69	0.0
2005/06	66	-4.3
2006/07	66	0.0
2007/08	66	0.0
2008/09	81	22.7

na is not applicable.

*Source*: Authors' analysis based on data from Delaware Department of Education (2009b).

The number and percentage of ELL students speaking each language fluctuated between 2002/03 and 2008/09. The number and percentage of ELL students speaking Spanish, Gujarati, English (Non-US), Arabic, Urdu, Telugu, and "other" languages increased from 2002/03 to 2008/09, but the changes were not consistent over time. The number of Spanish speakers doubled between 2002/03 and 2007/08, with annual increases ranging from 57 to 824 students, 6 then dropped 73 students from 2007/08 to 2008/09. The number of ELL students speaking "other" languages increased between 2002/03 and 2006/07, with annual increases ranging from 22 to 98 students, then dropped from 2006/07 to 2008/09.

Between 2002/03 and 2008/09, the number of ELL students speaking Creole, Chinese, Turkish,

TABLE 4

Number and percentage of ELL students in Delaware public schools, by native language, 2002/03–2008/09

	2002/03		200	3/04	200	4/05	200	5/06	2006/07 2007/08 2008			8/09		
Native language	Number of ELL students	Percent of the total number of ELL students												
Spanish	2,642	75.0	3,247	76.3	3,594	75.3	4,406	76.7	5,230	77.5	5,287	77.4	5,214	77.2
Creole	238	6.8	265	6.2	251	5.3	241	4.2	251	3.7	260	3.8	285	4.2
Chinese (Cantonese and Mandarin)	84	2.4	103	2.4	112	2.3	134	2.3	148	2.2	133	1.9	137	2.0
Gujarati	42	1.2	44	1.0	51	1.1	63	1.1	83	1.2	108	1.6	98	1.5
English (Non- U.S.)	_	_	_	_	14	0.3	47	0.8	72	1.1	79	1.2	87	1.3
Arabic	29	0.8	32	0.8	34	0.7	70	1.2	100	1.5	79	1.2	83	1.2
Korean	115	3.3	95	2.2	94	2.0	113	2.0	108	1.6	100	1.5	72	1.1
Turkish	42	1.2	38	0.9	53	1.1	64	1.1	61	0.9	60	0.9	64	0.9
Urdu	23	0.7	25	0.6	36	0.8	40	0.7	48	0.7	56	0.8	63	0.9
Telugu	10	0.3	15	0.4	22	0.5	28	0.5	31	0.5	39	0.6	55	0.8
French	34	1.0	43	1.0	50	1.0	48	0.8	55	0.8	61	0.9	53	0.8
Vietnamese	30	0.9	20	0.5	35	0.7	42	0.7	43	0.6	60	0.9	53	0.8
Other	234	6.6	327	7.7	425	8.9	447	7.8	518	7.7	509	7.5	488	7.2
Total number of ELL students	3,5	523	4,2	254	4,7	771	5,7	743	6,7	'48	6,8	331	6,7	752

ELL is English language learner.

Note: Percentages may not sum to 100 percent because of rounding.

<sup>—</sup> is not available because English (Non-U.S.) was not listed as a language with high ELL enrollment in 2002/03 or 2003/04.

French, and Vietnamese increased, but the percentage of ELL students speaking them decreased. During this period, both the number and percentage of ELL students speaking Korean decreased. Appendix C has more information on languages spoken by ELL students.

### TRENDS IN PERFORMANCE OF ELL STUDENTS

Under Title I of the NCLB Act, all students, including ELL students, are required to participate in their state's annual standards-based assessment program in reading/language arts, math, and as of 2008, science.

The following sections compare the performance (the percentage scoring at the meets the standard, exceeds the standard, or distinguished level) of ELL and non-ELL students on the Delaware Student Testing Program (DSTP; the Delaware assessment program is described in box 3). The percentage of students scoring at the meets the standard, exceeds the standard,

or distinguished level on each assessment from 2002/03 to 2008/09 is listed in appendix F.

### Reading

Grade 2. In 2005/06, no achievement gap existed between ELL and non-ELL students on the grade 2 reading assessment (figure 3). From 2005/06 to 2006/07, an achievement gap formed, with non-ELL students' performance 1.6 percentage points higher than that of ELL students. The gap fluctuated over the next two years, widening to 3.8 percentage points in 2007/08 and narrowing to 2.6 percentage points in 2008/09. ELL students' performance decreased 2.7 percentage points from 2005/06 to 2006/07 and increased 1.5 percentage points from 2006/07 to 2008/09, for a net decrease of 1.2 percentage points. Non-ELL students' performance decreased 1.1 percentage points from 2005/06 to 2006/07, increased 2.6 percentage points from 2006/07 to 2007/08, and decreased 0.1 percentage point from 2007/08 and 2008/09, for a net increase of 1.4 percentage points.

### BOX 3

### Delaware assessment program

The Delaware Student Testing Program (DSTP) measures academic achievement in reading and math in grades 2–10 and in science and social studies in grades 4, 6, 8, and 11. For each assessment, scores in each content area are reported as scale scores (raw scores converted to a common scale that allows numerical comparison of test results over time). The proficiency levels associated with score ranges are:

- Well below the standard indicates needs significant improvement.
- Below the standard—indicates needs improvement.
- *Meets the standard*—indicates good performance.

- Exceeds the standard—indicates very good performance.
- Distinguished—indicates excellent performance (Delaware Department of Education 2007).<sup>1</sup>

Scores at well below the standard and below the standard are considered below the state minimum of proficiency and indicate a need for additional instructional support. Complete state definitions of the proficiency levels for each assessment are in appendix D, and the score ranges for each proficiency level are in appendix E.

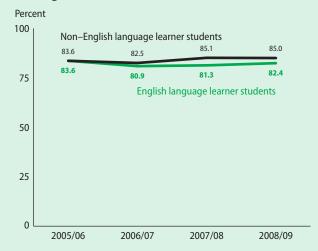
All students in Delaware must take the DSTP. The only exception is for ELL students who are in their first year in a U.S. school; they do not have to take the reading assessment, but they must take the math, science, and social studies assessments, with accommodations as appropriate. Accommodations include simplifying, paraphrasing, or translating the test directions and questions into the student's native language; allowing the student to use a bilingual dictionary; allowing the student to respond in his or her native language; permitting the student to take the test in a location separate from his or her peers; and providing the student with additional time to complete the test or to take extra breaks from testing.

### Note

1. Grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard.

### FIGURE 3

# Percentage of students scoring at the meets the standard or exceeds the standard level on the grade 2 Delaware Student Testing Program in reading, 2005/06–2008/09



*Note*: Grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard. For non–English language learner students, n=7,476 in 2005/06, n=7,710 in 2006/07, n=7,768 in 2007/08, and n=7,965 in 2008/09. For English language learner students, n=353 in 2005/06, n=392 in 2006/07, n=530 in 2007/08, and n=391 in 2008/09. Values in bold are those of English language learner students.

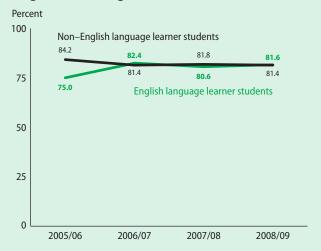
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

*Grade 3.* From 2005/06 to 2008/09, the 9.2 percentage point achievement gap between ELL and non-ELL students on the grade 3 reading assessment in 2005/06 reversed, with ELL students' performance higher than that of non-ELL students in 2006/07 and in 2008/09 (figure 4). ELL students' performance increased 7.4 percentage points from 2005/06 to 2006/07, decreased 1.8 percentage points from 2006/07 to 2007/08, and increased 1.0 percentage point from 2007/08 to 2008/09, for a net increase of 6.6 percentage points. Non-ELL students' performance decreased 2.8 percentage points from 2005/06 to 2008/09.

Grade 4. From 2005/06 to 2008/09, the achievement gap on the grade 4 reading assessment between ELL and non-ELL students narrowed 30.2 percentage points, from 31.9 percentage points in 2005/06 to 1.7 in 2008/09 (figure 5). ELL students' overall performance increased 29.7 percentage points, with the largest increase from 2005/06 to 2006/07 (22.0 percentage points),<sup>7</sup>

### FIGURE 4

### Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 3 Delaware Student Testing Program in reading, 2005/06–2008/09

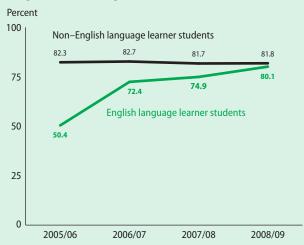


*Note*: For non–English language learner students, n=7,602 in 2005/06, n=7,619 in 2006/07, n=7,685 in 2007/08, and n=7,794 in 2008/09. For English language learner students, n=184 in 2005/06, n=255 in 2006/07, n=474 in 2007/08, and n=504 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

### FIGURE 5

# Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 4 Delaware Student Testing Program in reading, 2005/06–2008/09



*Note*: For non–English language learner students, n = 7,615 in 2005/06, n = 7,466 in 2006/07, n = 7,488 in 2007/08, and n = 7,654 in 2008/09. For English language learner students, n = 119 in 2005/06, n = 221 in 2006/07, n = 374 in 2007/08, and n = 482 in 2008/09. Values in bold are those of English language learner students.

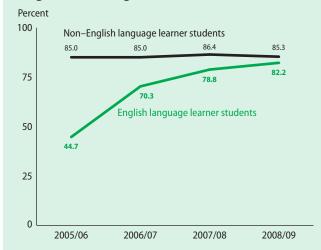
whereas non-ELL students' overall performance decreased 0.5 percentage point.

Grade 5. From 2005/06 to 2008/09, the achievement gap on the grade 5 reading assessment between ELL and non-ELL students narrowed 37.2 percentage points, from 40.3 percentage points in 2005/06 to 3.1 in 2008/09 (figure 6). Overall performance increased, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 37.5 percentage points, with the largest increase from 2005/06 to 2006/07 (25.6 percentage points),8 whereas non-ELL students' performance increased 1.4 percentage points from 2005/06 to 2007/08 and decreased 1.1 percentage points from 2007/08 to 2008/09, for a net increase of 0.3 percentage point.

Grade 6. From 2005/06 to 2008/09, the achievement gap on the grade 6 reading assessment between ELL and non-ELL students narrowed 7.6 percentage points performance increased, with larger gains among ELL

but remained in double digits (figure 7). Overall

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 5 Delaware Student Testing Program in reading, 2005/06-2008/09



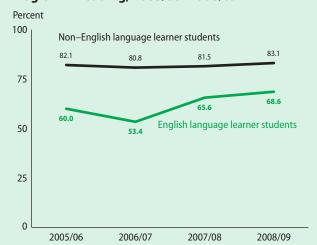
*Note*: For non–English language learner students, n = 7,778 in 2005/06, n = 7,657 in 2006/07, n = 7,484 in 2007/08, and n = 7,584 in 2008/09. For English language learner students, n = 85 in 2005/06, n = 118 in 2006/07, n = 320 in 2007/08, and n = 381 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

students than among non-ELL students, despite an initial widening of the achievement gap from 2005/06 to 2006/07. ELL students' performance decreased 6.6 percentage points from 2005/06 to 2006/07 and increased 15.2 percentage points from 2006/07 to 2008/09, for a net increase of 8.6 percentage points. Non-ELL students' performance decreased 1.3 percentage points from 2005/06 to 2006/07 and increased 2.3 percentage points from 2006/07 to 2008/09, for a net increase of 1.0 percentage point.

Grade 7. From 2005/06 to 2008/09, the achievement gap on the grade 7 reading assessment between ELL and non-ELL students narrowed 33.0 percentage points, from 42.7 percentage points in 2005/06 to 9.7 in 2008/09 (figure 8). Overall performance increased, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 36.8 percentage points, with the largest increases from 2005/06 to 2006/07 (21.0 percentage points) and from 2007/08 to 2008/09 (16.3 percentage points). Non-ELL students' performance increased 3.8 percentage points.

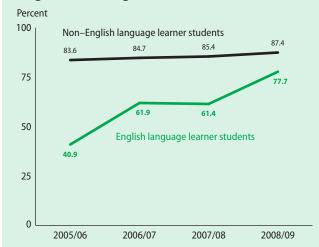
Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 6 Delaware Student Testing Program in reading, 2005/06-2008/09



Note: For non–English language learner students, n = 8,373 in 2005/06, n = 8,102 in 2006/07, n = 7,962 in 2007/08, and n = 7,781 in 2008/09. For English language learner students, n = 55 in 2005/06, n = 103 in 2006/07, n = 212 in 2007/08, and n = 354 in 2008/09. Values in bold are those of English language learner students.

### FIGURE 8

# Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 7 Delaware Student Testing Program in reading, 2005/06–2008/09



*Note*: For non–English language learner students, n=8,764 in 2005/06, n=8,781 in 2006/07, n=8,422 in 2007/08, and n=8,285 in 2008/09. For English language learner students, n=71 in 2005/06, n=105 in 2006/07, n=171 in 2007/08, and n=255 in 2008/09. Values in bold are those of English language learner students.

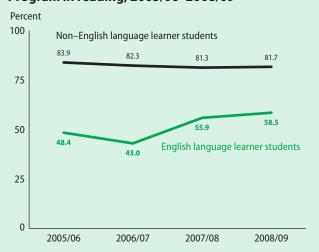
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

*Grade 8.* From 2005/06 to 2008/09, ELL students' overall performance on the grade 8 reading assessment increased, whereas non-ELL students' overall performance decreased, but the achievement gap remained above 20 percentage points throughout the period (figure 9). ELL students' performance decreased 5.4 percentage points from 2005/06 to 2006/07 but increased 15.5 percentage points from 2006/07 to 2008/09, for a net increase of 10.1 percentage points. Non-ELL students' performance decreased 2.2 percentage points from 2005/06 to 2008/09. As a result, the achievement gap narrowed 12.3 percentage points, from 35.5 percentage points in 2005/06 to 23.2 in 2008/09.

Grade 9. From 2005/06 to 2008/09, the achievement gap on the grade 9 reading assessment between ELL and non-ELL students narrowed 12.0 percentage points but remained at least 20 percentage points throughout the period (figure 10). ELL students' performance decreased 2.5 percentage points from 2005/06 to 2006/07 and increased 13.3 percentage points from 2006/07

### FIGURE 9

### Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 8 Delaware Student Testing Program in reading, 2005/06–2008/09

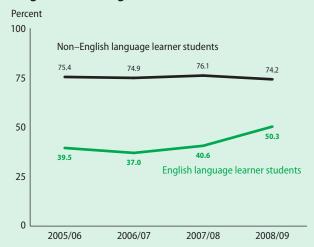


*Note*: For non–English language learner students, n=9,283 in 2005/06, n=9,203 in 2006/07, n=9,148 in 2007/08, and n=8,785 in 2008/09. For English language learner students, n=95 in 2005/06, n=107 in 2006/07, n=177 in 2007/08, and n=205 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

### FIGURE 10

# Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 9 Delaware Student Testing Program in reading, 2005/06–2008/09

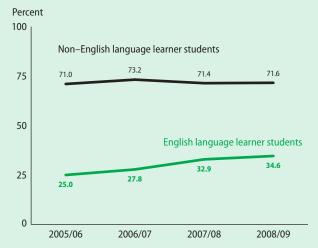


*Note*: For non–English language learner students, n = 9,954 in 2005/06, n = 10,036 in 2006/07, n = 9,811 in 2007/08, and n = 10,067 in 2008/09. For English language learner students, n = 129 in 2005/06, n = 127 in 2006/07, n = 170 in 2007/08, and n = 199 in 2008/09. Values in bold are those of English language learner students.

to 2008/09, for a net increase for 10.8 percentage points. Non-ELL students' performance decreased 0.5 percentage point from 2005/06 to 2006/07, increased 1.2 percentage points from 2006/07 to 2007/08, and decreased 1.9 percentage points from 2007/08 to 2008/09, for a net decrease of 1.2 percentage points.

Grade 10. From 2005/06 to 2008/09, the achievement gap on the grade 10 reading assessment between ELL and non-ELL students narrowed 9.0 percentage points but remained at or above 37 percentage points throughout the period (figure 11). Overall performance increased, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 9.6 percentage points from 2005/06 to 2008/09. Non-ELL students' performance increased 2.2 percentage points from 2005/06 to 2006/07, decreased 1.8 percentage points from 2006/07 to 2007/08, and increased 0.2 percentage point from 2007/08 to 2008/09, for a net increase of 0.6 percentage point.

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 10 Delaware Student Testing Program in reading, 2005/06–2008/09



*Note*: For non–English language learner students, n=7,473 in 2005/06, n=8,065 in 2006/07, n=8,247 in 2007/08, and n=8,204 in 2008/09. For English language learner students, n=72 in 2005/06, n=115 in 2006/07, n=146 in 2007/08, and n=133 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

Summary of achievement gaps. From 2005/06 to 2008/09, the overall achievement gap in reading between ELL and non-ELL students followed different patterns across grades (table 5). Non-ELL students' performance in reading was higher than that of ELL students across all years studied and in all grades studied, except in 2005/06 in grade 2, when the achievement gap was zero, and in 2006/07 and 2008/09 in grade 3, when the achievement gap was reversed. In grades 4, 5, and 10, the achievement gap, which was more than 30 percentage points in 2005/06, narrowed each year. In grades 6–9, the achievement gap was 22.1–42.7 percentage points in 2005/06 but narrowed to 9.7–23.9 by 2008/09. The achievement gap narrowed 30 percentage points or more in grades 4, 5, and 7 across the period studied.

The average achievement gap in reading between ELL and non-ELL students widened in higher grades, from 2.0 percentage points in grade 2 to 41.7 percentage points in grade 10. By 2008/09, the achievement gap was reversed in grade 3, was

TABLE 5
Achievement gap on the Delaware Student
Testing Program in reading between ELL and nonELL students, by grade, 2005/06–2008/09

Grade	2005/06	2006/07	2007/08	2008/09	Average across years studied
2	0.0	1.6	3.8	2.6	2.0
3	9.2	-1.0	1.2	-0.2	2.3
4	31.9	10.3	6.8	1.7	12.7
5	40.3	14.7	7.6	3.1	16.4
6	22.1	27.4	15.9	14.5	20.0
7	42.7	22.8	24.0	9.7	24.8
8	35.5	39.3	25.4	23.2	30.9
9	35.9	37.9	35.5	23.9	33.3
10	46.0	45.4	38.5	37.0	41.7

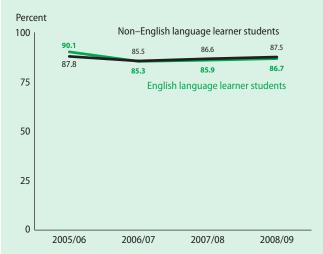
*Note*: The achievement gap was calculated by subtracting the percentage of ELL students who scored at the meets the standard, exceeds the standard, or distinguished level from that of non-ELL students. A negative value indicates that the percentage of students who scored at the meets the standard, exceeds the standard, or distinguished level was higher among ELL students than among non-ELL students.

less than 4 percentage points in grades 2, 4, and 5, was 9–15 percentage points in grades 6 and 7, was 23–24 percentage points in grades 8 and 9, and was 37 percentage points in grade 10.

Math

Grade 2. In 2005/06, ELL students' performance on the grade 2 math assessment was higher than that of non-ELL students, but in 2006/07–2008/09, non-ELL students' performance was higher, though never by more than 0.8 percentage point (figure 12). ELL students' performance decreased 4.8 percentage points from 2005/06 to 2006/07 and increased 1.4 percentage points from 2006/07 to 2008/09, for a net decrease of 3.4 percentage points. Non-ELL students' performance decreased 2.3 percentage points from 2005/06 to 2006/07 and increased 2.0 percentage points from 2006/07 to 2008/09, for a net decrease of 0.3 percentage point.

Percentage of students scoring at the meets the standard or exceeds the standard level on the grade 2 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: Grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard. For non–English language learner students, n=8,115 in 2005/06, n=8,379 in 2006/07, n=8,402 in 2007/08, and n=8,619 in 2008/09. For English language learner students, n=384 in 2005/06, n=448 in 2006/07, n=561 in 2007/08, and n=443 in 2008/09. Values in bold are those of English language learner students.

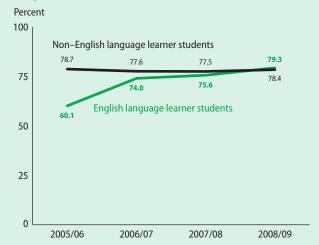
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

*Grade 3*. The 18.6 percentage point achievement gap between ELL and non-ELL students on the grade 3 math assessment in 2005/06 narrowed from 2005/06 to 2007/08 and reversed from 2007/08 to 2008/09, with ELL students' performance 0.9 percentage point higher than that of non-ELL students (figure 13). ELL students' performance increased 19.2 percentage points between 2005/06 and 2008/09. Non-ELL students' performance decreased 1.2 percentage points from 2005/06 to 2007/08 and increased 0.9 percentage point from 2007/08 to 2008/09, for a net decrease of 0.3 percentage point.

*Grade 4.* From 2005/06 to 2008/09, the achievement gap on the grade 4 math assessment between ELL and non-ELL students narrowed 29.2 percentage points, from 34.8 percentage points in 2005/06 to 5.6 in 2008/09 (figure 14). ELL students' performance increased 28.5 percentage points from 2005/06 to 2007/08<sup>11</sup> and decreased 0.7 percentage point from 2007/08 to 2008/09, for a net increase

### FIGURE 13

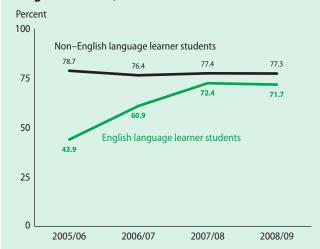
Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 3 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: For non–English language learner students, n=8,424 in 2005/06, n=8,469 in 2006/07, n=8,538 in 2007/08, and n=8,563 in 2008/09. For English language learner students, n=243 in 2005/06, n=315 in 2006/07, n=562 in 2007/08, and n=555 in 2008/09. Values in bold are those of English language learner students.

### FIGURE 14

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 4 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: For non–English language learner students, n=8,475 in 2005/06, n=8,375 in 2006/07, n=8,382 in 2007/08, and n=8,500 in 2008/09. For English language learner students, n=148 in 2005/06, n=289 in 2006/07, n=438 in 2007/08, and n=586 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

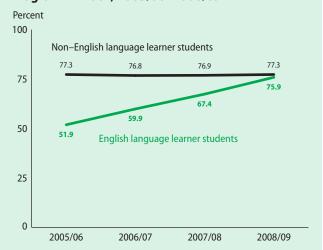
of 27.8 percentage points. Non-ELL students' performance decreased 2.3 percentage points from 2005/06 to 2006/07 and increased 0.9 percentage point from 2006/07 to 2008/09, for a net decrease of 1.4 percentage points.

*Grade 5.* From 2005/06 to 2008/09, ELL students' overall performance on the grade 5 math assessment increased 24.0 percentage points, while non-ELL students' overall performance changed less than 0.5 percentage point year to year (figure 15). As a result, the achievement gap between ELL and non-ELL students narrowed 24.0 percentage points, from 25.4 percentage points in 2005/06 to 1.4 in 2008/09.

*Grade 6*. From 2005/06 to 2008/09, the achievement gap on the grade 6 math assessment between ELL and non-ELL students narrowed 20.6 percentage points, from 34.6 percentage points in 2005/06 to 14.0 in 2008/09, despite widening from 2007/08 to 2008/09 (figure 16). Overall performance increased, with larger gains among ELL students than among non-ELL students. ELL students' performance

### FIGURE 15

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 5 Delaware Student Testing Program in math, 2005/06–2008/09

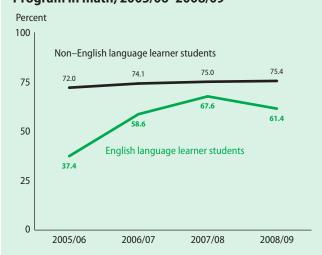


*Note*: For non–English language learner students, n = 8,634 in 2005/06, n = 8,506 in 2006/07, n = 8,381 in 2007/08, and n = 8,389 in 2008/09. For English language learner students, n = 108 in 2005/06, n = 162 in 2006/07, n = 393 in 2007/08, and n = 436 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

### FIGURE 16

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 6 Delaware Student Testing Program in math, 2005/06–2008/09



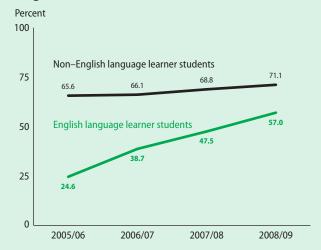
*Note*: For non–English language learner students, n=9,037 in 2005/06, n=8,920 in 2006/07, n=8,772 in 2007/08, and n=8,571 in 2008/09. For English language learner students, n=91 in 2005/06, n=128 in 2006/07, n=253 in 2007/08, and n=430 in 2008/09. Values in bold are those of English language learner students.

increased 30.2 percentage points from 2005/06 to 2007/08<sup>12</sup> and decreased 6.2 percentage points from 2007/08 to 2008/09, for a net increase of 24.0 percentage points. Non-ELL students' performance increased 3.4 percentage points from 2005/06 to 2008/09.

Grade 7. From 2005/06 to 2008/09, the achievement gap on the grade 7 math assessment between ELL and non-ELL students narrowed 26.9 percentage points, from 41.0 percentage points in 2005/06 to 14.1 in 2008/09 (figure 17). Overall performance increased, with larger gains among ELL students than among non-ELL students. ELL students' performance increased 32.4 percentage points, whereas non-ELL students' performance increased 5.5 percentage points.

*Grade 8.* From 2005/06 to 2008/09, the achievement gap on the grade 8 math assessment between ELL and non-ELL students narrowed 13.8 percentage points, from 31.8 percentage points in 2005/06 to 18.0 in 2008/09, despite widening from 2005/06 to 2006/07 (figure 18). Overall performance

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 7 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: For non–English language learner students, n=9,307 in 2005/06, n=9,477 in 2006/07, n=9,101 in 2007/08, and n=8,942 in 2008/09. For English language learner students, n=122 in 2005/06, n=137 in 2006/07, n=202 in 2007/08, and n=295 in 2008/09. Values in bold are those of English language learner students.

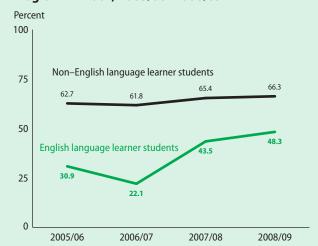
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

increased, with larger gains among ELL students than among non-ELL students. ELL students' performance decreased 8.8 percentage points from 2005/06 to 2006/07 and increased 26.2 percentage points from 2006/07 to 2008/09, for a net increase of 17.4 percentage points. Non-ELL students' performance decreased 0.9 percentage point from 2005/06 to 2006/07 and increased 4.5 percentage points from 2006/07 to 2008/09, for a net increase of 3.6 percentage points.

Grade 9. From 2005/06 to 2008/09, ELL and non-ELL students' overall performance on the grade 9 math assessment increased by similar amounts; thus, there was no change in the achievement gap, which exceeded 20 percentage points throughout the period (figure 19). ELL students' performance increased 1.9 percentage points from 2005/06 to 2006/07, decreased 1.6 percentage points from 2006/07 to 2007/08, and increased 2.6 percentage points from 2007/08 to 2008/09, for a net increase of 2.9 percentage points. Non-ELL students' performance increased 3.8 percentage points.

FIGURE 18

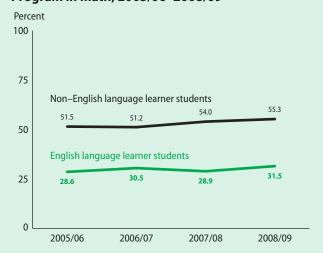
Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 8 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: For non–English language learner students, n = 9,879 in 2005/06, n = 9,809 in 2006/07, n = 9,832 in 2007/08, and n = 9,398 in 2008/09. For English language learner students, n = 139 in 2005/06, n = 140 in 2006/07, n = 200 in 2007/08, and n = 240 in 2008/09. Values in bold are those of English language learner students.

### FIGURE 19

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 9 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: For non–English language learner students, n=10,311 in 2005/06, n=10,541 in 2006/07, n=10,416 in 2007/08, and n=10,632 in 2008/09. For English language learner students, n=147 in 2005/06, n=131 in 2006/07, n=204 in 2007/08, and n=219 in 2008/09. Values in bold are those of English language learner students.

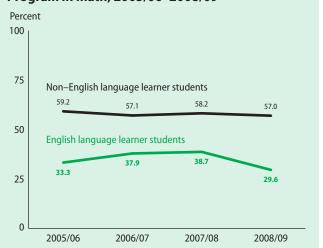
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

Grade 10. From 2005/06 to 2008/09, overall performance on the grade 10 math assessment decreased, with larger losses among ELL students than among non-ELL students (figure 20). As a result, the 25.9 percentage point achievement gap between ELL and non-ELL students widened. ELL students' performance increased 5.4 percentage points from 2005/06 to 2007/08 and decreased 9.1 percentage points from 2007/08 to 2008/09, for a net decrease of 3.7 percentage points. Non-ELL students' performance decreased 2.1 percentage points from 2005/06 to 2006/07, increased 1.1 percentage points from 2006/07 to 2007/08, and decreased 1.2 percentage points from 2007/08 to 2008/09, for a net decrease of 2.2 percentage points.

Summary of achievement gaps. From 2005/06 to 2008/09, the overall achievement gap in math between ELL and non-ELL students narrowed in grades 4–8, widened in grades 9 and 10, and reversed in grade 3 (table 6). In grade 2, ELL students' performance was higher than that of

### FIGURE 20

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 10 Delaware Student Testing Program in math, 2005/06–2008/09



*Note*: For non–English language learner students, n=7,387 in 2005/06, n=8,299 in 2006/07, n=8,570 in 2007/08, and n=8,523 in 2008/09. For English language learner students, n=87 in 2005/06, n=116 in 2006/07, n=163 in 2007/08, and n=152 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

TABLE 6

Achievement gap on the Delaware Student Testing Program in math between ELL and non-ELL students, by grade, 2005/06–2008/09

Grade	2005/06	2006/07	2007/08	2008/09	Average across years studied
2	-2.3	0.2	0.7	0.8	-0.2
3	18.6	3.6	1.9	-0.9	5.8
4	34.8	15.5	5.0	5.6	15.2
5	25.4	16.9	9.5	1.4	13.3
6	34.6	15.5	7.4	14.0	17.9
7	41.0	27.4	21.3	14.1	26.0
8	31.8	39.7	21.9	18.0	27.9
9	22.9	20.7	25.1	23.8	23.1
10	25.9	19.2	19.5	27.4	23.0

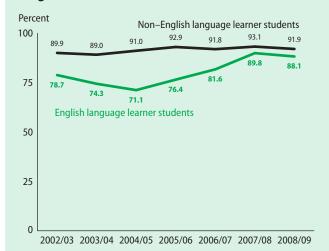
Note: The achievement gap was calculated by subtracting the percentage of ELL students who scored at the meets the standard, exceeds the standard, or distinguished level from that of non-ELL students. A negative value indicates that the percentage of students who scored at the meets the standard, exceeds the standard, or distinguished level was higher among ELL students than among non-ELL students.

non-ELL students' in 2005/06, but in 2006/07–2008/09, non-ELL students' performance was at most 0.8 percentage point higher. In grade 3, the achievement gap narrowed over time and reversed from 2007/08 to 2008/09. In grades 5 and 7, the achievement gap narrowed every year from 2005/06 to 2008/09. In grades 4, 6, and 8–10, the achievement gap fluctuated. From 2005/06 to 2008/09, the achievement gap narrowed 20 percentage points or more in grades 4–7, with the largest changes from 2005/06 to 2006/07.

The average achievement gap in math between ELL and non-ELL students was wider in middle school (grades 6–8) and high school (grades 9–10) than in elementary school (grades 2–5). By 2008/09, the achievement gap was no greater than 6 percentage points in grades 2–5, was 14–18 percentage points in grades 6–8, and was 24–27 percentage points in grades 9 and 10.

### FIGURE 21

# Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 4 Delaware Student Testing Program in science, 2002/03–2008/09



Note: For non–English language learner students, n=8,270 in 2002/03, n=8,590 in 2003/04, n=8,363 in 2004/05, n=8,322 in 2005/06, n=8,407 in 2006/07, n=8,385 in 2007/08, and n=8,527 in 2008/09. For English language learner students, n=239 in 2002/03, n=183 in 2003/04, n=263 in 2004/05, n=305 in 2005/06, n=228 in 2006/07, n=440 in 2007/08, and n=606 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

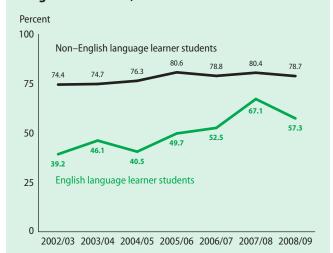
### Science

Grade 4. From 2002/03 to 2008/09, overall performance on the grade 4 science assessment increased, with larger gains among ELL students than among non-ELL students, despite a decrease in performance from 2002/03 to 2004/05 (figure 21). ELL students' performance increased 9.4 percentage points, whereas non-ELL students' performance increased 2.0 percentage points. As a result, the achievement gap between ELL and non-ELL students narrowed 7.4 percentage points, from 11.2 percentage points in 2002/03 to 3.8 in 2008/09.

*Grade* 6. From 2002/03 to 2008/09, overall performance on the grade 6 science assessment fluctuated, but there was a general upward trend, with larger gains among ELL students than among non-ELL students (figure 22). ELL students' performance increased 18.1 percentage points,

### FIGURE 22

### Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 6 Delaware Student Testing Program in science, 2002/03–2008/09



Note: For non–English language learner students, n=8,888 in 2002/03, n=8,996 in 2003/04, n=9,114 in 2004/05, n=9,134 in 2005/06, n=8,934 in 2006/07, n=8,744 in 2007/08, and n=8,603 in 2008/09. For English language learner students, n=204 in 2002/03, n=115 in 2003/04, n=173 in 2004/05, n=149 in 2005/06, n=118 in 2006/07, n=231 in 2007/08, and n=457 in 2008/09. Values in bold are those of English language learner students.

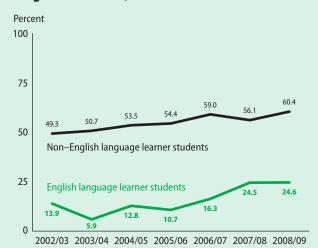
whereas non-ELL students' performance increased 4.3 percentage points. As a result, the achievement gap between ELL and non-ELL students narrowed 13.8 percentage points, from 35.2 percentage points in 2002/03 to 21.4 in 2008/09.

Grade 8. From 2002/03 to 2008/09, overall performance on the grade 8 science assessment increased by roughly the same amount for ELL and non-ELL students (figure 23). ELL students' performance increased 10.7 percentage points, whereas non-ELL students' performance increased 11.1 percentage points. As a result, the achievement gap between ELL and non-ELL students widened 0.4 percentage point, from 35.4 percentage points in 2002/03 to 35.8 in 2008/09.

*Grade 11.* From 2002/03 to 2008/09, overall performance on the grade 11 science assessment increased, and the achievement gap widened

FIGURE 23

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 8 Delaware Student Testing Program in science, 2002/03–2008/09



Note: For non–English language learner students, n=9,247 in 2002/03, n=9,524 in 2003/04, n=9,620 in 2004/05, n=9,687 in 2005/06, n=9,635 in 2006/07, n=9,687 in 2007/08, and n=9,183 in 2008/09. For English language learner students, n=101 in 2002/03, n=169 in 2003/04, n=156 in 2004/05, n=121 in 2005/06, n=123 in 2006/07, n=200 in 2007/08, and n=244 in 2008/09. Values in bold are those of English language learner students.

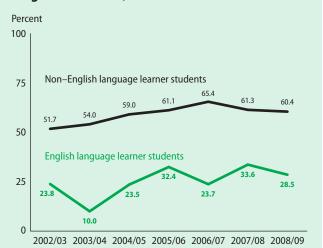
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

(figure 24). ELL students' performance increased 4.7 percentage points, whereas non-ELL students' performance increased 8.7 percentage points. As a result, the achievement gap between ELL and non-ELL students widened 4.0 percentage points, from 27.9 percentage points in 2002/03 to 31.9 in 2008/09.

Summary of achievement gaps. From 2002/03 to 2008/09, the overall achievement gap in science between ELL and non-ELL students narrowed in grades 4 and 6 and widened in grades 8 and 11, but the changes were not consistent over time (table 7). In grade 4, the achievement gap widened every year from 2002/03 to 2004/05 then narrowed every year from 2004/05 to 2007/08 to 3–4 percentage points in 2007/08 and 2008/09. In grades 6, 8, and 11, the achievement gap fluctuated. For all grades studied, the achievement gap narrowed from 2006/07 to 2007/08 and widened from 2007/08 to

FIGURE 24

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 11 Delaware Student Testing Program in science, 2002/03–2008/09



Note: For non–English language learner students, n=6,572 in 2002/03, n=6,612 in 2003/04, n=6,932 in 2004/05, n=6,632 in 2005/06, n=7,047 in 2006/07, n=7,317 in 2007/08, and n=7,608 in 2008/09. For English language learner students, n=80 in 2002/03, n=30 in 2003/04, n=68 in 2004/05, n=68 in 2005/06, n=97 in 2006/07, n=116 in 2007/08, and n=137 in 2008/09. Values in bold are those of English language learner students.

TABLE 7
Achievement gap on the Delaware Student Testing Program in science between ELL and non-ELL students,
by grade, 2002/03–2008/09

Grade	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Average across years studied
4	11.2	14.7	19.9	16.5	10.2	3.3	3.8	11.4
6	35.2	28.6	35.8	30.9	26.3	13.3	21.4	27.4
8	35.4	44.8	40.7	43.7	42.7	31.6	35.8	39.2
11	27.9	44.0	35.5	28.7	41.7	27.7	31.9	33.9

Note: The achievement gap was calculated by subtracting the percentage of ELL students scoring at the meets the standard, exceeds the standard, or distinguished level from that of non-ELL students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

2008/09, with the largest increase occurring in grade 6 (8.9 percentage points).

The average achievement gap in science between ELL and non-ELL students was wider in grades 6, 8, and 11 than in grade 4. By 2008/09, the achievement gap was 3.8 percentage points in grade 4, 21.4 percentage points in grade 6, and 32–36 percentage points in grades 8 and 11.

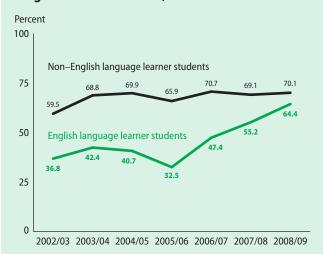
### Social studies

Grade 4. From 2002/03 to 2008/09, the achievement gap on the grade 4 social studies assessment between ELL and non-ELL students narrowed 17.0 percentage points, from 22.7 percentage points in 2002/03 to 5.7 in 2008/09 (figure 25). Overall performance increased despite decreases from 2003/04 to 2005/06. ELL students' performance increased 27.6 percentage points, with a near doubling from 32.5 percent in 2005/06 to 64.4 percent in 2008/09, whereas non-ELL students' performance increased 10.6 percentage points.

Grade 6. From 2002/03 to 2008/09, overall performance on the grade 6 social studies assessment decreased then increased, with larger gains among ELL students than among non-ELL students (figure 26). ELL students' performance decreased 5.8 percentage points from 2002/03 to 2004/05 and increased 17.3 percentage points from 2004/05 to 2008/09, for a net increase of 11.5 percentage points. Non-ELL students' performance decreased 6.1 percentage

### FIGURE 25

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 4 Delaware Student Testing Program in social studies, 2002/03–2008/09



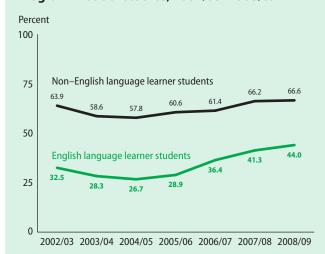
Note: For non–English language learner students, n=8,266 in 2002/03, n=8,585 in 2003/04, n=8,355 in 2004/05, n=8,319 in 2005/06, n=8,401 in 2006/07, n=8,374 in 2007/08, and n=8,522 in 2008/09. For English language learner students, n=239 in 2002/03, n=184 in 2003/04, n=263 in 2004/05, n=305 in 2005/06, n=228 in 2006/07, n=440 in 2007/08, and n=606 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

points from 2002/03 to 2004/05 and increased 8.8 percentage points from 2004/05 to 2008/09, for a net increase of 2.7 percentage points. As a result, the achievement gap between ELL and non-ELL students narrowed 8.8 percentage points, from 31.4 percentage points in 2002/03 to 22.6 in 2008/09.

### FIGURE 26

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 6 Delaware Student Testing Program in social studies, 2002/03–2008/09



*Note*: For non–English language learner students, n=8,885 in 2002/03, n=8,982 in 2003/04, n=9,098 in 2004/05, n=9,124 in 2005/06, n=8,921 in 2006/07, n=8,734 in 2007/08, and n=8,594 in 2008/09. For English language learner students, n=203 in 2002/03, n=113 in 2003/04, n=172 in 2004/05, n=149 in 2005/06, n=118 in 2006/07, n=230 in 2007/08, and n=457 in 2008/09. Values in bold are those of English language learner students.

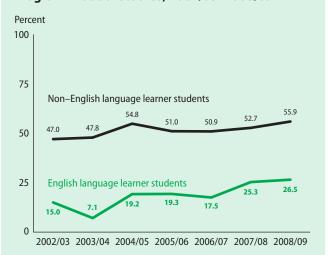
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

Grade 8. From 2002/03 to 2008/09, performance on the grade 8 social studies assessment varied from year to year, with ELL students' performance 27–40 percentage points lower than that of non-ELL students (figure 27). ELL students' performance increased 11.5 percentage points, whereas non-ELL students' performance increased 8.9 percentage points. As a result, the achievement gap narrowed 2.6 percentage points, from 32.0 percentage points in 2002/03 to 29.4 in 2008/09.

*Grade 11.* From 2002/03 to 2008/09, ELL students' performance on the grade 11 social studies assessment was at least 22 percentage points below that of non-ELL students (figure 28). ELL students' performance decreased 5.6 percentage points, and non-ELL students' performance decreased 2.1 percentage points. As a result, the achievement gap between ELL and non-ELL students widened 3.5 percentage points, from 22.1 percentage points in 2002/03 to 25.6 in 2008/09.

### FIGURE 27

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 8 Delaware Student Testing Program in social studies, 2002/03–2008/09



Note: For non–English language learner students, n=9,219 in 2002/03, n=9,501 in 2003/04, n=9,607 in 2004/05, n=9,661 in 2005/06, n=9,611 in 2006/07, n=9,668 in 2007/08, and n=9,160 in 2008/09. For English language learner students, n=100 in 2002/03, n=169 in 2003/04, n=156 in 2004/05, n=119 in 2005/06, n=126 in 2006/07, n=198 in 2007/08, and n=242 in 2008/09. Values in bold are those of English language learner students.

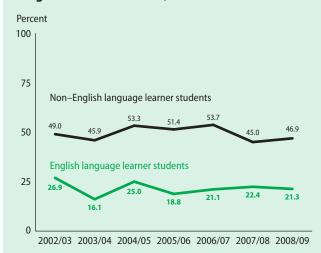
Source: Authors' analysis based on data from Delaware Department of Education (2009a).

Summary of achievement gaps. From 2002/03 to 2008/09, the overall achievement gap in social studies between ELL and non-ELL students narrowed in grades 4, 6, and 8 and widened in grade 11, but the changes were not consistent over time (table 8). In grade 4, the achievement gap widened every year from 2002/03 to 2005/06 and narrowed every year from 2005/06 to 2008/09 to 5.7 percentage points in 2008/09. In grades 6, 8, and 11, the achievement gap fluctuated across the period studied.

The achievement gap in social studies between ELL and non-ELL students was wider in middle school (grades 6 and 8) and high school (grade 11) than in elementary school (grade 4). By 2008/09, the achievement gap was no greater than 6 percentage points in grade 4 but was 23–29 percentage points in grades 6, 8, and 11.

#### FIGURE 28

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 11 Delaware Student Testing Program in social studies, 2002/03–2008/09



Note: For non–English language learner students, n=6,532 in 2002/03, n=6,552 in 2003/04, n=6,888 in 2004/05, n=6,597 in 2005/06, n=7,036 in 2006/07, n=7,304 in 2007/08, and n=7,584 in 2008/09. For English language learner students, n=78 in 2002/03, n=31 in 2003/04, n=68 in 2004/05, n=64 in 2005/06, n=95 in 2006/07, n=116 in 2007/08, and n=136 in 2008/09. Values in bold are those of English language learner students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

TABLE 9

Average achievement gap on the Delaware

Student Testing Program between ELL and non-ELL students, by content area, 2002/03–2008/09

Grade	Reading <sup>a</sup>	Matha	Science	Social studies
2	2.0	-0.2	na	na
3	2.3	5.8	na	na
4	12.7	15.2	11.4	22.1
5	16.4	13.3	na	na
6	20.0	17.9	27.4	28.1
7	24.8	26.0	na	na
8	30.9	27.9	39.2	32.9
9	33.3	23.1	na	na
10	41.7	23.0	na	na
11	na	na	33.9	27.7

na is not applicable because the Delaware Student Testing Program in reading and math is administered in grades 2–10 only and the Delaware Student Testing Program in science and social studies is administered in grades 4, 6, 8, and 11 only.

a. Average is for 2005/06-2008/09.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

Achievement gap on the Delaware Student Testing Program in social studies between ELL and non-ELL students, by grade, 2002/03–2008/09

Grade	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	Average across years studied
4	22.7	26.4	29.2	33.4	23.3	13.9	5.7	22.1
6	31.4	30.3	31.1	31.7	25.0	24.9	22.6	28.1
8	32.0	40.7	35.6	31.7	33.4	27.4	29.4	32.9
11	22.1	29.8	28.3	32.6	32.6	22.6	25.6	27.7

*Note*: The achievement gap was calculated by subtracting the percentage of ELL students scoring at the meets the standard, exceeds the standard, or distinguished level from that of non-ELL students. A negative value indicates that the percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level was higher among ELL students than among non-ELL students.

Source: Authors' analysis based on data from Delaware Department of Education (2009a).

Summary of achievement gaps across content areas

From 2005/06 and 2008/09, non-ELL students' performance was higher than that of ELL students in reading and math in grades 3–10 (table 9).

However, in some years and grades, ELL students' performance was the same as or higher than that of non-ELL students. In grade 2 math, ELL students' average performance was higher than that of non-ELL students from 2005/06 to 2008/09. Across those years, the average annual

From 2002/03 to 2008/09, in all grades tested, non-ELL students' performance was higher than that of ELL students in science and social studies, both overall and in every year studied achievement gap in math between ELL and non-ELL students was narrower than that in reading in grades 2, 5, 6, and 8–10. In grades 2, 5, 6, and 8, the difference between the achievement gap in reading and math was 2–3 percentage points, whereas the achievement gap was 10 percentage points narrower in math than in reading

in grade 9 and nearly 19 percentage points narrower in math than in reading in grade 10.

From 2002/03 to 2008/09, in all grades tested, non-ELL students' performance was higher than that of ELL students in science and social studies, both overall and in every year studied. The average achievement gap between ELL and non-ELL students was wider in science than in reading and math in grades 6 and 8 but narrower in grade 4. The average achievement gap between ELL and non-ELL students was wider in social studies than in reading, math, and science in grades 4 and 6 and wider than in reading and math in grade 8. While comparisons across grades should be interpreted cautiously, the achievement gap in science and social studies in grade 11 was narrower than the achievement gap in reading in grade 10 but wider than the achievement gap in math in grade 10, which differs from the pattern in earlier grades.

### STUDY LIMITATIONS

This study has several limitations:

- This study is purely descriptive. It does not explain changes in the percentage of students meeting the standard or higher or in the achievement gap between ELL and non-ELL students.
- This study uses cross-sectional state-level data, not longitudinal student-level data.
   Therefore, data trends represent different students across time as opposed to longitudinal trends of the same students.

- The study reports reading and math assessment scores for ELL and non-ELL students for 2005/06–2008/09. Scores for grades 3, 5, 8, and 10 from 2005/06 onward are not comparable to scores prior to 2005/06 because of changes in the score ranges for the proficiency levels. Thus, reading and math scores prior to 2005/06 are not included in the trend analyses.
- The achievement levels of former ELL students (those who have exited a language assistance program) are unknown. The patterns of assessment scores observed over time and across grades are influenced by the reclassification of ELL students as former ELL students. Former ELL students have higher English language proficiency than ELL students do, which has a larger impact on the ELL student population than on the non-ELL student population because of their relative sizes. The remaining ELL students could be among the lower performing students on the state assessments, reflecting lower English language proficiency (Abedi 2004; Abedi, Courtney, and Leon 2003). Research indicates that English language proficiency is positively associated with academic achievement (Beal, Adams, and Cohen 2010; Garcia-Vazquez et al. 1997; Genesee et al. 2005). Thus, former ELL students may contribute to the declines in scores observed in the ELL student population across grades.
- Data on accommodations for ELL students
  were unavailable. Some of the accommodations
  used by Delaware, such as additional time to
  take the assessments, might have affected the
  comparability of assessment outcomes for ELL
  and non-ELL students (Durán 2008).

### **CONCLUSION**

Statewide ELL student enrollment data illustrate the changing demographics of Delaware's student population from 2002/03 to 2008/09. Both ELL student and total enrollment rose across the state, with ELL student enrollment increasing more.

ELL students accounted for a larger percentage of total enrollment in elementary school (grades K–5) than in middle school (grades 6–8) and high school (grades 9–12). From 2002/03 to 2008/09, Spanish speakers accounted for the largest percentage of ELL students. In addition, English language proficiency levels were higher in 2008/09 than in 2005/06.

The assessment data from the Delaware Department of Education indicate that, for student populations enrolled in public schools from 2005/06 to 2008/09, ELL students' performance in reading increased in grades 3–10 but decreased in grade 2. ELL students' performance in math increased in grades 3-9 but decreased in grades 2 and 10. From 2002/03 to 2008/09, ELL students' performance in science increased in all grades reported (grades 4, 6, 8, and 11). ELL students' performance in social studies increased in grades 4, 6, and 8 but decreased in grade 11. Across the years studied, the achievement gap between ELL and non-ELL students narrowed in reading in grades 4-10 and in math in grades 4–8. In grades 2 and 3, in some years, ELL students' performance was the same as or higher than that of non-ELL students. Non-ELL students' performance in science and social studies was higher than that of ELL students in all grades and years studied.

From 2005/06 to 2008/09, the average achievement gap between ELL and non-ELL students was narrower in math than in reading in grades 2, 5, 6, and 8–10. The average achievement gap between ELL and non-ELL students was wider in math than in reading in grades 3, 4, and 7, wider in science than in reading and math in grades 6 and 8, and wider in social studies than in reading, math, and science in grades 4 and 6.

The average achievement gaps are consistent with findings in the research literature. The average achievement gaps for all subject areas were wider in middle school and high school than in elementary school, except in math in grades 9 and 10 and in science and social studies in grade 11. One possible explanation for the increase in the

achievement gap in middle school and high school is the increased language demand of the tests in those grades. In math, English language proficiency levels are associated with performance on solving word problems (Beal et al. 2010), and the assessments in middle school and high school emphasize word problems more than computational exercises. Adding more word problems on the math assessment increases the linguistic complexity of the assessment. Thus, it is possible that the linguistic complexity of assessments may interfere with ELL students' ability to present a valid picture of what they know and are able to do. Students with content area knowledge in math will be unlikely to score at the meets the standard, exceeds the standard, or distinguished level if they cannot interpret the vocabulary and linguistic structure of the assessment (Abedi 2004).

The finding of an achievement gap in math, science, and social studies that is narrower in high school than in middle school is not consistent with some of the research literature (Gándara et al. 2003) but is similar to the 2009 NAEP math results, which showed a narrower gap between ELL and non-ELL students in grade 12 than in grades 4 and 8 (U.S. Department of Education 2010). A possible explanation is the increased level of English language proficiency among students in Delaware. In 2005/06, 73.4 percent of ELL students were classified at the three lowest levels of English language proficiency. ELL students at those levels would have knowledge and be able to use general and some specific English language in the content areas (World-Class Instructional Design and Assessment Consortium 2011). By 2008/09, 48.1 percent of ELL students were classified at the three lowest levels of English language proficiency. This indicates that more ELL students have knowledge and are able to use specific and some technical language of the content areas. English language proficiency is a significant predictor of math assessment performance in high school (Beal et al. 2010). The increasing English language proficiency among ELL students may account for the smaller achievement gap in math in high school.

### APPENDIX A DATA AND METHODOLOGY

This appendix describes the data and methodology used in this study.

Data

This study uses both enrollment and assessment data.

Enrollment data. Enrollment data on English language learner (ELL) students in Delaware were accessed from Delaware English language learner reports on the Delaware Department of Education website (total and ELL student enrollment for 2002/03–2008/09, ELL student enrollment by grade for 2002/03–2008/09, ELL student English language proficiency levels for 2005/06–2008/09, and languages spoken by ELL students from 2002/03 to 2008/09).

The 2002/03 school year was selected as the base year because it was the first year that states were required to disaggregate and report data on traditionally underserved populations under the No Child Left Behind (NCLB) Act of 2001.

The enrollment data include information from all public elementary, middle, and high schools (regular and charter schools), vocational schools, and special education schools. Enrollment data do not include information from nonpublic private or parochial schools.

Assessment data. Assessment data on the Delaware Student Testing Program (DSTP) were accessed from Delaware Statewide Assessment Reports on the Delaware Department of Education website (scores in reading and math in grades 2–10 for 2005/06–2008/09, scores in science and social studies in grades 4, 6, 8, and 11 for 2002/03–2008/09).

In 2005/06, the DSTP in reading and math for grades 3, 5, 8, and 10 adopted new score ranges.<sup>14</sup>

Because the authors did not have access to the actual scale scores, the reading and math results from 2005/06 onward are not comparable to results prior to 2005/06. In addition, the reading and math assessments were administered in grades 2, 4, 6, 7, and 9 for the first time in 2005/06; thus, 2005/06 was selected as the base year for reading and math achievement. The DSTP in science and social studies for grades 4, 6, 8, and 11 did not change during the period studied; thus, 2002/03 was selected as the base year for science and social studies achievement.

As with the enrollment data, the assessment data include information from all public elementary, middle, and high schools (regular and charter schools), vocational schools, and special education schools. Assessment data do not include information from nonpublic private or parochial schools.

### Methodology

Descriptive analyses were conducted on the enrollment and assessment data. For the enrollment data, the growth of the ELL student population (as a percentage of total enrollment) was tracked across time. The percentage of ELL student enrollment in each grade level and the percentage of ELL student enrollment at each English language proficiency level were presented. In addition, the languages spoken by the highest number of ELL students were presented.

Assessment data were used to present the academic performance of ELL and non-ELL students on the reading, math, science, and social studies assessments across time. The percentage of ELL and non-ELL students scoring at the meets the standard, exceeds the standard, or distinguished level (referred to as "performance" in the analysis) was used to measure student achievement, because that is what Delaware uses to measure accountability for NCLB. No tests of statistical significance were conducted between ELL and non-ELL students.

### APPENDIX B STUDENT ENROLLMENT BY GRADE IN DELAWARE

TABLE B1 **ELL student and total enrollment, by grade, 2002/03–2008/09** 

2002/					2003/04			2004/05 2005/06				
Grade	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)
Prekindergarten	8	665	1.2	11	650	1.7	23	671	3.4	9	680	1.3
Kindergarten	501	7,762	6.5	680	7,953	8.6	777	8,280	9.4	740	8,511	8.7
1	552	8,919	6.2	679	9,065	7.5	822	9,112	9.0	982	9,567	10.3
2	443	8,802	5.0	581	8,720	6.7	630	8,862	7.1	831	9,012	9.2
3	305	9,111	3.3	400	8,902	4.5	428	8,786	4.9	605	9,034	6.7
4	242	9,010	2.7	259	9,101	2.8	274	8,872	3.1	423	8,896	4.8
5	220	9,092	2.4	290	9,206	3.2	266	9,173	2.9	351	9,059	3.9
6	220	9,308	2.4	207	9,443	2.2	243	9,492	2.6	278	9,530	2.9
7	202	9,602	2.1	209	9,730	2.1	241	9,868	2.4	282	9,860	2.9
8	231	9,961	2.3	280	10,222	2.7	308	10,496	2.9	348	10,492	3.3
9	240	10,435	2.3	240	11,016	2.2	311	11,252	2.8	363	11,637	3.1
10	160	8,821	1.8	184	8,786	2.1	175	9,082	1.9	230	9,279	2.5
11	105	7,755	1.4	139	7,690	1.8	135	7,772	1.7	151	7,826	1.9
12	94	7,201	1.3	95	7,293	1.3	138	7,390	1.9	150	7,555	2.0

	2006/07			2007/08			2008/09			
Grade	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)	Number of ELL students	Total enrollment	ELL student enrollment as a share of total enrollment (percent)	
Prekindergarten	8	671	1.2	0	677	0.0	3	738	0.4	
Kindergarten	1,069	8,604	12.4	1,215	8,864	13.7	1,249	9,458	13.2	
1	1,114	9,717	11.5	1,157	9,903	11.7	1,263	9,786	12.9	
2	908	9,350	9.7	922	9,526	9.7	961	9,737	9.9	
3	713	9,176	7.8	702	9,565	7.3	641	9,621	6.7	
4	577	8,982	6.4	506	9,207	5.5	472	9,521	5.0	
5	441	9,038	4.9	423	9,087	4.7	362	9,241	3.9	
6	322	9,306	3.5	359	9,300	3.9	310	9,265	3.3	
7	300	9,897	3.0	309	9,634	3.2	320	9,536	3.4	
8	335	10,267	3.3	298	10,328	2.9	308	9,908	3.1	
9	360	11,780	3.1	367	11,617	3.2	316	11,755	2.7	
10	257	9,770	2.6	255	10,138	2.5	235	9,953	2.4	
11	175	8,221	2.1	149	8,445	1.8	161	8,791	1.8	
12	169	7,482	2.3	169	7,750	2.2	151	8,120	1.9	

ELL is English language learner.

 $\textit{Source:} \ \textbf{Authors'} \ \textbf{analysis} \ \textbf{based} \ \textbf{on} \ \textbf{data} \ \textbf{from} \ \textbf{Delaware} \ \textbf{Department} \ \textbf{of} \ \textbf{Education} \ \textbf{(2009b)}.$ 

### APPENDIX C LANGUAGE ENROLLMENT IN DELAWARE

TABLE C1

Main languages spoken by ELL students in Delaware, 2002/03–2008/09

Language	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Spanish	2,642	3,247	3,594	4,406	5,230	5,287	5,214
Creole	238	265	251	241	251	260	285
Chinese (Cantonese and Mandarin)	84	103	112	134	148	133	137
Gujarati	42	44	51	63	83	108	98
English (Non-US)	0	0	14	47	72	79	87
Arabic	29	32	34	70	100	79	83
Korean	115	95	94	113	108	100	72
Turkish	42	38	53	64	61	60	64
Urdu	23	25	36	40	48	56	63
Telugu	10	15	22	28	31	39	55
French	34	43	50	48	55	61	53
Vietnamese	30	20	35	42	43	60	53
Tagalog (Filipino)	17	18	20	29	45	65	44
Hindi	24	32	34	37	35	37	43
Bengali	22	30	36	31	43	38	41
Panjabi	7	12	24	26	26	22	31
Russian	18	21	21	27	36	36	30
Swahili	12	17	27	34	39	33	30
Twi	0	12	0	13	10	23	26
Tamil	0	0	0	13	17	20	22
Portuguese	0	0	0	15	18	24	18
Pashto (Northern)	19	28	32	30	31	20	17
Italian	0	0	0	0	10	12	13
Yoruba	0	0	11	12	16	18	11
Afrikaans	0	8	0	0	12	12	0
Akan	7	8	0	0	0	0	0
Amharic	0	7	10	10	11	0	0
Farsi	16	17	10	0	0	0	0
German	0	0	0	11	13	0	0
Greek	0	7	0	0	0	0	0
Japanese	0	0	0	14	16	13	0
Serbo-Croatian	7	0	0	0	0	0	0
Ukrainian	0	0	10	0	0	0	0
Other	85	110	190	145	140	136	162

Source: Delaware Department of Education 2009b.

(CONTINUED)

# APPENDIX D PERFORMANCE-LEVEL DESCRIPTIONS OF THE DELAWARE STUDENT TESTING PROGRAM

This appendix presents the Delaware Department of Education's knowledge and skills required for each performance level on the state assessments.

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
2	na	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	na
		<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of few unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of many unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of most unfamiliar words.</li> </ul>	
		<ul> <li>Inconsistently locates informa- tion in text to retell, restate, and support ideas and concepts.</li> </ul>	<ul> <li>Adequately locates informa- tion in text to retell, restate, and support ideas and concepts.</li> </ul>	Thoroughly locates informa- tion in text to retell, restate, and support ideas and concepts.	
		<ul> <li>Rarely demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> </ul>	<ul> <li>Adequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> </ul>	<ul> <li>Thoroughly demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> </ul>	
		<ul> <li>Rarely compares and synthesizes ideas within and among texts to formulate and express opinions.</li> </ul>	<ul> <li>Adequately com- pares and synthe- sizes ideas within and among texts to formulate and express opinions.</li> </ul>	<ul> <li>Thoroughly com- pares and synthe- sizes ideas within and among texts to formulate and express opinions.</li> </ul>	
		<ul> <li>Rarely connects information with prior knowledge to draw conclu- sions about con- tent, ideas, and author's choices and to make predictions about text.</li> </ul>	<ul> <li>Adequately con- nects informa- tion with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> </ul>	Thoroughly con- nects informa- tion with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.	
		<ul> <li>Inconsistently uses summaries, graphic organiz- ers, and outlines to organize text.</li> </ul>			

Well below Grade the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
(continued)	<ul> <li>Rarely identifies and explains figurative language and rarely differentiates between literal and nonliteral meanings.</li> <li>Inconsistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Inconsistently identifies story elements, genres, story features, and story structures.</li> <li>Inadequately makes inferences about characters and their motivations with minimal support from the story.</li> <li>Rarely relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	<ul> <li>Adequately uses summaries, graphic organizers, and outlines to organize text.</li> <li>Adequately identifies and explains figurative language and adequately differentiates between literal and nonliteral meanings.</li> <li>Adequately identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Adequately identifies story elements, genres, story features, and story structures.</li> <li>Adequately makes inferences about characters and their motivations with some relevant support from the story.</li> <li>Adequately relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	<ul> <li>Thoroughly uses summaries, graphic organizers, and outlines to organize text.</li> <li>Thoroughly identifies and explains figurative language and thoroughly differentiates between literal and nonliteral meanings.</li> <li>Consistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Consistently identifies story elements, genres, story features, and story structures.</li> <li>Thoroughly makes inferences about characters and their motivations with some relevant support from the story.</li> <li>Thoroughly relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	

Well belo		Meets the standard	Exceeds the standard	Distinguished
2 (con- tinued)	When using grade- appropriate informa tive and technical text, a student who performs at this leve	tive and technical text, a student who	When using grade- appropriate informa- tive and technical text, a student who performs at this level:	
	<ul> <li>Rarely identifies and describes author's use of textual fea- tures and text structures.</li> </ul>	<ul> <li>Adequately identifies and describes author's use of textual features and text structures.</li> </ul>	<ul> <li>Consistently identifies and describes author's use of textual features and text structures.</li> </ul>	
	<ul> <li>Inadequately makes inferences about content with minimal sup port from the tex</li> </ul>	content with mini- mal support from	<ul> <li>Thoroughly makes inferences about content with mini- mal support from the text.</li> </ul>	
	<ul> <li>Rarely identi- fies and explains the purpose and effect of media messages.</li> </ul>	<ul> <li>Adequately identi- fies and explains the purpose and effect of media messages.</li> </ul>	<ul> <li>Thoroughly identi- fies and explains the purpose and effect of media messages.</li> </ul>	
	<ul> <li>Inconsistently distinguishes between fact and opinion.</li> </ul>	Adequately distinguishes between fact and opinion.	<ul> <li>Consistently distinguishes between fact and opinion.</li> </ul>	

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
3	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:
	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of few unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of some unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of many unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of most unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of almost all unfamiliar</li> </ul>
	<ul> <li>Rarely locates information in text to retell, restate, and support ideas and concepts.</li> <li>Rarely dem-</li> </ul>	<ul> <li>Inadequately locates informa- tion in text to retell, restate, and support ideas and concepts.</li> </ul>	<ul> <li>Adequately locates informa- tion in text to retell, restate, and support ideas and concepts.</li> </ul>	<ul> <li>Thoroughly locates informa- tion in text to retell, restate, and support ideas and concepts.</li> </ul>	<ul> <li>Thoroughly and effectively locates information in text to retell, restate, and support ideas</li> </ul>
	onstrates an understanding and appreciation of social, cultural, and historical information from texts.	<ul> <li>Inadequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> </ul>	<ul> <li>Adequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> </ul>	<ul> <li>Thoroughly demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> </ul>	<ul> <li>and concepts.</li> <li>Thoroughly         <ul> <li>and effectively                 demonstrates an                  understanding                  and appreciation                  of social, cultural,                  and historical</li> </ul> </li> </ul>
	<ul> <li>Rarely compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Rarely connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> <li>Rarely uses sum-</li> </ul>	<ul> <li>Inadequately compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Inadequately connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions</li> </ul>	<ul> <li>Adequately compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Adequately connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> </ul>	<ul> <li>Thoroughly compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Thoroughly connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> </ul>	<ul> <li>information from texts.</li> <li>Insightfully compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Insightfully connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to</li> </ul>
	maries, graphic organizers, and outlines to orga- nize text.	<ul> <li>about text.</li> <li>Inconsistently uses summaries, graphic organizers, and outlines to organize text.</li> </ul>	Adequately uses summaries, graphic organiz- ers, and outlines to organize text.	Thoroughly uses summaries, graphic organiz- ers, and outlines to organize text.	make predictions about text.

	Well below	Below the	Meets the	Exceeds the	ment, by grade
Grade	the standard	standard	standard	standard	Distinguished
3 (con- tinued)	<ul> <li>Rarely identifies and explains figu-</li> </ul>	<ul> <li>Inadequately identifies and explains figurative language and inadequately differentiates between literal and nonliteral meanings.</li> <li>Inconsistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:         <ul> <li>Inconsistently identifies story elements, genres, story features, and story structures.</li> <li>Inadequately makes inferences about characters and their motivations with mostly general support from the story.</li> <li>Inadequately relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul> </li> </ul>	<ul> <li>Adequately identifies and explains figurative language and adequately differentiates between literal and nonliteral meanings.</li> <li>Adequately identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Adequately identifies story elements, genres, story features, and story structures.</li> <li>Adequately makes inferences about characters and their motivations with some relevant support from the story.</li> <li>Adequately relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	<ul> <li>Thoroughly identifies and explains figurative language and thoroughly differentiates between literal and nonliteral meanings.</li> <li>Consistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Consistently identifies story elements, genres, story features, and story structures.</li> <li>Thoroughly makes inferences about characters and their motivations with sufficient and relevant support from the story.</li> <li>Thoroughly relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	<ul> <li>Thoroughly and effectively uses summaries, graphic organizers, and outlines to organize text.</li> <li>Thoroughly and effectively identifies and explains figurative language and thoroughly and effectively differentiates between literal and nonliteral meanings.</li> <li>Consistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Thoroughly and effectively identifies story elements, genres, story features, and story structures.</li> <li>Insightfully makes inferences about characters and their motivations with sufficient, specific, and relevant support from the story.</li> <li>Thoroughly and effectively relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>

Well belo Grade the stand		Below the standard	Meets the standard	Exceeds the standard	Distinguished
(con- appropri tinued) tive and text, a stu performs	udent who at this level:	When using grade- appropriate informa- tive and technical text, a student who performs at this level:	When using grade- appropriate informa- tive and technical text, a student who performs at this level:	When using grade- appropriate informa- tive and technical text, a student who performs at this level:	When using grade- appropriate informa- tive and technical text, a student who performs at this level:
and d autho textua	and text	<ul> <li>Inconsistently identifies and describes author's use of textual features and text structures.</li> </ul>	<ul> <li>Adequately identifies and describes author's use of textual features and text structures.</li> </ul>	<ul> <li>Consistently identifies and describes author's use of textual features and text structures.</li> </ul>	Thoroughly and effectively identifies and describes author's use of textual features and text
infere conte mal so the te • Rarely fies ar the po effect messa • Rarely guish	videnti- nd explains urpose and of media	<ul> <li>Inadequately makes inferences about content with mostly general support from the text.</li> <li>Inadequately identifies and explains the purpose and effect of media messages.</li> <li>Inadequately distinguishes between fact and opinion.</li> </ul>	<ul> <li>Adequately makes inferences about content with some relevant support from the text.</li> <li>Adequately identifies and explains the purpose and effect of media messages.</li> <li>Adequately distinguishes between fact and opinion.</li> </ul>	<ul> <li>Thoroughly makes inferences about content with sufficient and relevant support from the text.</li> <li>Thoroughly identifies and explains the purpose and effect of media messages.</li> <li>Consistently distinguishes between fact and opinion.</li> </ul>	<ul> <li>Thoroughly and effectively makes inferences about content with sufficient, specific, and relevant support from the text.</li> <li>Thoroughly and effectively identifies and explains the purpose and effect of media messages.</li> <li>Consistently distinguishes between fact and opinion.</li> </ul>

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
4 and 5	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:
	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of few unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of some unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of many unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of most unfamiliar words.</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of almost all unfamiliar</li> </ul>
	_	unfamiliar words.  Inadequately locates information in text to retell, restate, and support ideas and concepts.  Inadequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.  Inadequately compares and synthesizes ideas within and among texts to formulate and express opinions.  Inadequately connects information with prior knowledge to draw conclusions about content, ideas, and author's	unfamiliar words.  Adequately locates information in text to retell, restate, and support ideas and concepts.  Adequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.  Adequately compares and synthesizes ideas within and among texts to formulate and express opinions.  Adequately connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to	unfamiliar words.  Thoroughly locates information in text to retell, restate, and support ideas and concepts.  Thoroughly demonstrates an understanding and appreciation of social, cultural, and historical information from texts.  Thoroughly compares and synthesizes ideas within and among texts to formulate and express opinions.  Thoroughly connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to	all unfamiliar words.  Thoroughly and effectively locates information in text to retell, restate, and support ideas and concepts.  Thoroughly and effectively demonstrates an understanding and appreciation of social, cultural, and historical information from texts.  Insightfully compares and synthesizes ideas within and among texts to formulate and express opinions.  Insightfully connects information with prior knowledge to draw conclusions about content,
	text.  Rarely uses summaries, graphic organizers, and outlines to organize text.	choices and to make predictions about text.  Inconsistently uses summaries, graphic organizers, and outlines to organize text.	<ul> <li>make predictions about text.</li> <li>Adequately uses summaries, graphic organizers, and outlines to organize text.</li> </ul>	<ul> <li>make predictions about text.</li> <li>Thoroughly uses summaries, graphic organizers, and outlines to organize text.</li> </ul>	ideas, and author's choices and to make predictions about text.

Well below	Below the	Meets the	Exceeds the	Distinguished
<ul> <li>Grade the standard</li> <li>4 and 5 (continued)</li> <li>Rarely interprets and explains the effect of figurative language and rarely differentiates between literal and nonliteral meanings.</li> <li>Rarely recognizes the effect of point of view and the impact of author's decisions.</li> <li>Rarely identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Rarely identifies story elements, genres, story features, and story structures.</li> <li>Rarely makes inferences about characters and their motivations with minimal support from the story.</li> <li>Rarely relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	<ul> <li>Inadequately interprets and explains the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.</li> <li>Inadequately recognizes the effect of point of view and the impact of author's decisions.</li> <li>Inconsistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Inconsistently identifies story elements, genres, story features, and story structures.</li> <li>Inadequately makes inferences about characters and their motivations with mostly general support from the story.</li> <li>Inadequately relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	<ul> <li>Adequately interprets and explains the effect of figurative language and adequately differentiates between literal and nonliteral meanings.</li> <li>Adequately recognizes the effect of point of view and the impact of author's decisions.</li> <li>Adequately identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Adequately identifies story elements, genres, story features, and story structures.</li> <li>Adequately makes inferences about characters and their motivations with some relevant support from the story.</li> <li>Adequately relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> </ul>	Thoroughly interprets and explains the effect of figurative language and thoroughly differentiates between literal and nonliteral meanings.  Thoroughly recognizes the effect of point of view and the impact of author's decisions.  Consistently identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  Consistently identifies story elements, genres, story features, and story structures.  Thoroughly makes inferences about characters and their motivations with sufficient and relevant support from the story.  Thoroughly relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.	<ul> <li>Thoroughly and effectively uses summaries, graphic organizers, and outlines to organize text.</li> <li>Thoroughly and effectively interprets and explains the effect of figurative language and thoroughly and effectively differentiates between literal and nonliteral meanings.</li> <li>Thoroughly and effectively recognizes the effect of point of view and the impact of author's decisions.</li> <li>Consistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Thoroughly and effectively identifies story elements, genres, story features, and story structures.</li> <li>Insightfully makes inferences about characters and their motivations with sufficient, specific, and relevant support from the story.</li> </ul>

Well below Grade the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
4 and 5 (continued)  5 (continued)  4 and technical tive and technical text, a student who performs at this level:  • Rarely identifies and describes author's use of textual features and text structures.  • Rarely makes inferences about content with minimal support from the text.  • Rarely identifies and explains the purpose and effect of media messages.  • Rarely evaluates texts for bias, misinformation, and validity and rarely discriminates between fact and opinion.	When using grade- appropriate informa- tive and technical text, a student who performs at this level:  Inconsistently identifies and describes author's use of textual features and text structures.  Inadequately makes inferences about content with mostly gen- eral support from the text.  Inadequately iden- tifies and explains the purpose and effect of media messages.  Inadequately evaluates texts for bias, misinforma- tion, and validity and inadequately discriminates between fact and opinion.	When using grade- appropriate informa- tive and technical text, a student who performs at this level:      Adequately     identifies and     describes author's     use of textual     features and text     structures.      Adequately makes     inferences about     content with some     relevant support     from the text.      Adequately identi- fies and explains     the purpose and     effect of media     messages.      Adequately     evaluates texts for     bias, misinforma- tion, and validity     and adequately     discriminates     between fact and     opinion.	When using grade- appropriate informa- tive and technical text, a student who performs at this level:  Consistently identifies and describes author's use of textual features and text structures.  Thoroughly makes inferences about content with sufficient and relevant support from the text.  Thoroughly identifies and explains the purpose and effect of media messages.  Thoroughly evaluates texts for bias, misinforma- tion, and validity and consistently discriminates between fact and opinion.	<ul> <li>Thoroughly and effectively relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> <li>When using gradeappropriate informative and technical text, a student who performs at this level:</li> <li>Thoroughly and effectively identifies and describes author's use of textual features and text structures.</li> <li>Thoroughly and effectively makes inferences about content with sufficient, specific, and relevant support from the text.</li> <li>Thoroughly and effectively identifies and explains the purpose and effect of media messages.</li> <li>Thoroughly and effectively evaluates texts for bias, misinformation, and validity and consistently discriminates between fact and opinion.</li> </ul>

# Performance-level descriptors for the Delaware Student Testing Program reading assessment, by grade

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
6, 7, and 8	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:
	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of few unfamiliar words.</li> <li>Rarely locates information in text to retell, restate, and support ideas and concepts.</li> <li>Rarely demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> <li>Rarely compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Rarely connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> <li>Rarely uses summaries, graphic organizers, and outlines to organize text.</li> <li>Rarely interprets and explains the effect of figurative language and rarely differentiates between literal and nonliteral meanings.</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of some unfamiliar words.</li> <li>Inadequately locates information in text to retell, restate, and support ideas and concepts.</li> <li>Inadequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> <li>Inadequately compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Inadequately connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> <li>Inconsistently uses summaries, graphic organizers, and outlines to organize text.</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of many unfamiliar words.</li> <li>Adequately locates information in text to retell, restate, and support ideas and concepts.</li> <li>Adequately demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> <li>Adequately compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Adequately connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> <li>Adequately uses summaries, graphic organizers, and outlines to organize text.</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of most unfamiliar words.</li> <li>Thoroughly locates information in text to retell, restate, and support ideas and concepts.</li> <li>Thoroughly demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> <li>Thoroughly compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Thoroughly connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> <li>Thoroughly uses summaries, graphic organizers, and outlines to organize text.</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of almost all unfamiliar words.</li> <li>Thoroughly and effectively locates information in text to retell, restate, and support ideas and concepts.</li> <li>Thoroughly and effectively demonstrates an understanding and appreciation of social, cultural, and historical information from texts.</li> <li>Insightfully compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Insightfully connects information with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.</li> <li>Thoroughly and effectively uses summaries, graphic organizers, and outlines to organize text.</li> </ul>
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Well below Below the Grade the standard standard			
Grade the standard <u>standard</u>	Meets the	Exceeds the	
6, 7, Rarely recognizes and 8 the effect of point (conor of view and the tinued) impact of author's decisions.  Rarely identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  Rarely identifies story elements, genres, story features, and story structures.  Rarely makes inferences about characters and their motivations with minimal support from the story.  Rarely relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.  Inadequately interprets and explains the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  Inconsistently identifies the molikely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  Inconsistently identifies the molikely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  Inconsistently identifies the molikely reason an author wrote a text.  When using gradeap	Adequately interprets and explains the effect of figurative language and adequately differentiates between literal and nonliteral meanings.     Adequately recognizes the effect of point of view and the impact of author's decisions.     Adequately identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:     Adequately identifies story elements, genres, story features, and story structures.     Adequately makes inferences about characters and their motivations with some relevant support from the story.     Adequately relates to the emotional appeal of stories and poems and to the feelings of characters of vary-	Thoroughly interprets and explains the effect of figurative language and thoroughly differentiates between literal and nonliteral meanings.  Thoroughly recognizes the effect of point of view and the impact of author's decisions.  Consistently identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  Consistently identifies story elements, genres, story features, and story structures.  Thoroughly makes inferences about characters and their motivations with sufficient and relevant support from the story.  Thoroughly relates to the emotional appeal of stories and poems and to the feelings of	with sufficient, specific, and relevant support from the story.  Thoroughly and

When using grade-appropriate informative and technical text, a student who performs at this level:   Rarely identifies and describes author's use of textual features and text structures.   Rarely makes inferences about content with minimal support from the text.   Rarely identifies and describes author's use of textual features and text structures.   Rarely identifies and describes author's use of textual features and text structures.   Rarely identifies and describes author's use of textual features and text structures.   Rarely makes inferences about content with minimal support from the text.   Rarely identifies and describes author's use of textual features and text structures.   Rarely identifies and describes author's use of textual features and text structures.   Rarely makes inferences about content with minimal support from the text.   Rarely identifies and describes author's use of textual features and text structures.   Rarely identifies and describes author's use of textual features and text structures.   Rarely identifies and describes author's use of textual features and text structures.   Adequately identifies and text text from the text. the purpose and the purpose and effect of media messages.   Rarely evaluates texts for bias, misinformation, validity, completeness, accuracy, and clarity and rarely discriminates between fact and opinion.   Adequately identifies and describes author's use of textual features and text structures.   Adequately identifies and describes author's use of textual features and text structures.   Adequately identifies and describes and text structures.   Adequately identifies and deffect of media messages.   Adequately identifies and deffect of media messages.
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Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
9 and 10	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:	When using grade- appropriate text, a student who per- forms at this level:
	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of few unfamiliar words.</li> <li>Rarely locates information in text</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of some unfamiliar words.</li> <li>Inadequately locates informa-</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of many unfamiliar words.</li> <li>Adequately locates informa-</li> </ul>	<ul> <li>Uses words, phrases, sentences, and paragraphs to determine the meaning of most unfamiliar words.</li> <li>Thoroughly locates informa-</li> </ul>	<ul> <li>Uses words, phrases, sen- tences, and paragraphs to determine the meaning of almost all unfamiliar words.</li> <li>Thoroughly and</li> </ul>
	to retell, restate, and support ideas and concepts.  Rarely dem-	tion in text to retell, restate, and support ideas and concepts.	tion in text to retell, restate, and support ideas and concepts.	tion in text to retell, restate, and support ideas and concepts.	effectively locates information in text to retell, restate, and support ideas
	onstrates an understanding and appreciation of social, cultural, political, and historical information from texts.	<ul> <li>Inadequately demonstrates an understanding and appreciation of social, cultural, political, and his- torical information</li> </ul>	<ul> <li>Adequately demonstrates an understanding and appreciation of social, cultural, political, and his- torical information</li> </ul>	Thoroughly demonstrates an understanding and appreciation of social, cultural, political, and his- torical information	<ul> <li>and concepts.</li> <li>Thoroughly         <ul> <li>and effectively                 demonstrates an                  understanding                  and appreciation                  of social, cultural,</li> </ul> </li> </ul>
	<ul> <li>Rarely compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Rarely connects information with prior knowledge to draw conclu-</li> </ul>	<ul> <li>from texts.</li> <li>Inadequately compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Inadequately connects informa-</li> </ul>	<ul> <li>Adequately compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Adequately connects information with prior</li> </ul>	<ul> <li>from texts.</li> <li>Thoroughly compares and synthesizes ideas within and among texts to formulate and express opinions.</li> <li>Thoroughly connects information with prior</li> </ul>	political, and historical information from texts.  Insightfully compares and synthesizes ideas within and among texts to formulate and express opinions.  Insightfully con-
	sions about content, ideas, and author's choices and to make predictions about text.  Rarely uses sum-	tion with prior knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.	knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.	knowledge to draw conclusions about content, ideas, and author's choices and to make predictions about text.	nects informa- tion with prior knowledge to draw conclusions about content, ideas, and author's choices and to
	maries, graphic organizers, and outlines to orga- nize text.	Inconsistently uses summaries, graphic organizers, and outlines to organize text.	Adequately uses summaries, graphic organiz- ers, and outlines to organize text.	Thoroughly uses summaries, graphic organiz- ers, and outlines to organize text.	make predictions about text.

Well below Below the	Meets the	Exceeds the	Distinguished
9 and • Rarely interprets and explains the effect of figurative language and rarely differentiates between literal and nonliteral meanings.  • Rarely recognizes the effect of point of view and the impact of author's decisions.  • Rarely identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  • Rarely identifies story elements, genres, story features, and story structures.  • Rarely makes inferences about characters and their motivations with minimal support from the story.  • Rarely relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.  • Inadequately interprets and explains the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  • Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  • Inadequately interprets and explains the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  • Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  • Inadequately recognizes the effect of point of view and the impact of author's decisions.  • Inconsistently identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  • Rarely makes inferences about characters and their motivations with mostly general support from the story.  • Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  • Inadequately recognizes the effect of figurative language and inadequately differentiates between literal and nonliteral meanings.  • Inadequately recognizes the effect of point of view author's decisions.  • Inadequately recognizes the effect of point of view author's decisions.	Adequately interprets and explains the effect of figurative language and adequately differentiates between literal and nonliteral meanings.      Adequately recognizes the effect of point of view and the impact of author's decisions.      Adequately identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:      Adequately identifies story elements, genres, story features, and story structures.      Adequately makes inferences about characters and their motivations with some relevant support from the story.      Adequately relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.	Thoroughly interprets and explains the effect of figurative language and thoroughly differentiates between literal and nonliteral meanings.  Thoroughly recognizes the effect of point of view and the impact of author's decisions.  Consistently identifies the most likely reason an author wrote a text.  When using gradeappropriate literary text, a student who performs at this level:  Consistently identifies story elements, genres, story features, and story structures.  Thoroughly makes inferences about characters and their motivations with sufficient and relevant support from the story.  Thoroughly relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.	<ul> <li>Thoroughly and effectively uses summaries, graphic organizers, and outlines to organize text.</li> <li>Thoroughly and effectively interprets and explains the effect of figurative language and thoroughly and effectively differentiates between literal and nonliteral meanings.</li> <li>Thoroughly and effectively recognizes the effect of point of view and the impact of author's decisions.</li> <li>Consistently identifies the most likely reason an author wrote a text.</li> <li>When using gradeappropriate literary text, a student who performs at this level:</li> <li>Thoroughly and effectively identifies story elements, genres, story features, and story structures.</li> <li>Insightfully makes inferences about characters and their motivations with sufficient,</li> </ul>

# Performance-level descriptors for the Delaware Student Testing Program reading assessment, by grade

Well below Grade the standar			eets the andard	Exceeds the standard	Distinguished
content mal supj the text.  Rarely ic and exp suasive t and the and effe media m  Rarely ev texts for informar ity, comp accuracy clarity an discrimin	e informa- chnical approprion tive and text, a st perform describes ause of describes ause of describes.  Index describes ause of describes ause of describes ause of describes ause of describes.  Inakes Inade makes about with miniport from with eral statechniques purpose ct of techniques purpose ct of techniques arbiton, valid-pleteness, y, and nd rarely mates and fact and accuit equal nates	ate informa- technical tiv udent who tes s at this level: pe sistently ifies and ibes author's f textual res and text tures. equately s inferences t content mostly gen- upport from ext. equately iden- and explains tasive inques and trof media	hen using grade- propriate informa- re and technical xt, a student who erforms at this level: Adequately identifies and describes author's use of textual features and text structures. Adequately makes inferences about content with some relevant support from the text. Adequately identi- fies and explains persuasive techniques and the purpose and effect of media messages. Adequately evaluates texts for bias, misinfor- mation, validity, completeness, accuracy, and clar- ity and adequately discriminates between fact and opinion.	When using grade-appropriate informative and technical text, a student who performs at this level:  Consistently identifies and describes author's use of textual features and text structures.  Thoroughly makes inferences about content with sufficient and relevant support from the text.  Thoroughly identifies and explains persuasive techniques and the purpose and effect of media messages.  Thoroughly evaluates texts for bias, misinformation, validity, completeness, accuracy, and clarity and consistently discriminates between fact and opinion.	<ul> <li>Thoroughly and effectively relates to the emotional appeal of stories and poems and to the feelings of characters of varying genders, races, and disabilities.</li> <li>When using gradeappropriate informative and technical text, a student who performs at this level:         <ul> <li>Thoroughly and effectively identifies and describes author's use of textual features and text structures.</li> <li>Thoroughly and effectively makes inferences about content with sufficient, specific, and relevant support from the text.</li> <li>Thoroughly and effectively identifies and explains persuasive techniques and the purpose and effect of media messages.</li> <li>Thoroughly and effectively evaluates texts for bias, misinformation, validity, completeness, accuracy, and clarity and consistently discriminates between fact and opinion.</li> </ul> </li> </ul>

na is not applicable because grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard. Source: Delaware Department of Education 2010.

TABLE D2

Performance-level descriptors for the Delaware Student Testing Program math assessment, by grade

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
2	na	Students at this level do not demonstrate knowledge of grade-level content. They inconsistently apply limited strategies to solve routine problems. Explanations are often absent, incomplete, or are not relevant to the mathematical content.	Students at this level demonstrate knowledge of grade-level content. Students can apply familiar math knowledge to solve problems that may require more than one step. They use effective strategies and reasoning to solve problems.	Students at this level consistently demonstrate knowledge of grade level content. They apply their knowledge to analyze and solve a variety of problems. Students clearly explain results and communicate understanding.	na
3–7	Students at this level do not demonstrate knowledge of grade-level content. They use inappropriate strategies to solve problems. Explanations are often absent, are not relevant to the mathematical content, or are restatements of the text.	Students at this level demonstrate gaps and misconceptions in grade-level content knowledge. They can solve problems that rely on previously learned routines that have been practiced extensively. Students at this level show evidence of solving problems that are based on recall or that have a specific mathematical strategy indicated. Explanations meant to show results, to indicate understanding, or to communicate strategies are incomplete or absent.	Students at this level demonstrate knowledge of grade-level content. Students can apply familiar math knowledge to solve problems that may require more than one step. They use effective, sometimes informal strategies and reasoning to solve problems. They develop adequate explanations that show results, indicate understanding, and communicate strategies.	Students at this level consistently demonstrate grade-level content knowledge. They apply their knowledge to analyze and solve a variety of problems, including those that require multiple decisions and planning and those that are set in unfamiliar contexts. Students use mathematical language to clearly justify results and communicate understanding.	Students at this level expertly demonstrate knowledge of grade-level content. Students develop new approaches or use sophisticated strategies to successfully solve novel and complex problems. They skillfully communicate well developed solutions that show evidence of insightful mathematical connections, judgment, and planning.

# Performance-level descriptors for the Delaware Student Testing Program math assessment, by grade

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Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished	
8–10	do not demonstrate knowledge of grade-level content.  They use inappropriate strategies to solve problems. Explanations are often absent, are not relevant to the mathematical content, or are restatements of the text.	Students at this level demonstrate gaps and misconceptions in grade-level content knowledge. They can solve problems that rely on previously learned routines that have been practiced extensively. They show evidence of solving problems that are based on recall or that have a specific mathematical strategy indicated. Explanations meant to show results, to indicate understanding, or to communicate strategies are incomplete or absent.	Students at this level demonstrate knowledge of grade-level content. Students can apply familiar math knowledge to solve problems that may require more than one step. They use effective, often informal strategies and reasoning to solve problems. They develop adequate explanations that show results, indicate understanding, and communicate strategies.	Students at this level consistently demonstrate grade-level content knowledge. They apply their knowledge to analyze and solve a variety of problems, including those that require multiple decisions or are set in unfamiliar contexts. They show evidence of planning and demonstrate understanding of symbolic or formal mathematical language and methods.  They clearly justify results and communicate understanding.	Students at this level expertly demonstrate knowledge of grade-level content. Students develop new approaches or use sophisticated strategies to successfully solve novel and complex problems. They demonstrate fluency with symbolic and formal mathematical language and methods.  They skillfully communicate well developed solutions that show evidence of insightful mathematical connections, judgment, and planning.	

na is not applicable because grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard. Source: Delaware Department of Education 2010.

TABLE D3

Performance-level descriptors for the Delaware Student Testing Program science assessment, by grade

Students at this level demonstrate rudimentary knowledge of grade-level skills and achient. They are most likely to:  - Read measurements on simple tools.  - Identify some physical properties of materials and parts of electrical circuits.  - Recognize Earth as a planet in the solar system and identify some simple structure/ function relationships based on external chanacteristics, recognize a few properties of food chains.  - Provide responses that are often absent or not relevant to science concepts.  - Students at this level demonstrate eleval edimonstrate aceta advanced knowledge of grade-level skills and and content. They are most likely to:  - Method they are most likely to: - Identify some physical properties of materials and parts of electrical circuits Recognize Earth as a planet in the solar system and identify some soil components Recognize simple patterns in the solar system and aports of electrical circuits Recognize some simple tructure/ function relationships that are often absent or not relevant to science concepts Provide responses that are often absent or not relevant to science concepts Provide responses with minimal explanation Provide responses with minimal explanation Provide responses with minimal explanation Provide partial ead to limited resources Provide partial explanations Provide partial explanations Provide partial explanations Provide partial explanations Provi	Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
(CONTINUED)	4	demonstrate rudimentary knowledge of grade-level skills and content. They are most likely to:  Read measurements on simple tools.  Identify some physical properties of materials and parts of electrical circuits.  Recognize Earth as a planet in the solar system and identify some soil components.  Identify some simple structure/function relationships based on external characteristics and have a beginning understanding of food chains.  Provide responses that are often absent or not relevant to science	level demonstrate basic knowledge of grade-level skills and content. They are most likely to:  Identify ques- tions that can be answered by investigation, recognize data patterns, and interpret infor- mation from bar graphs.  Demonstrate par- tial knowledge of physical proper- ties of materials and light.  Recognize simple patterns in the solar system and recognize a few properties of Earth materials.  Recognize some structure/func- tion relationships based on external characteristics, recognize that physical traits can be inherited, iden- tify simple food chains, and know some of the fac- tors that lead to limited resources.  Provide responses with minimal	demonstrate acceptable knowledge of grade-level skills and content. They are most likely to:  Identify a fair test, make simple predictions, design investigations using simple tools and equipment, and display data using bar graphs.  Demonstrate knowledge of physical properties of different materials, states of matter, mixtures and solutions, and forms of energy; recognize some properties of light; and have a general understanding of electrical circuits.  Recognize simple patterns in the sun, Earth, and moon system and have some understanding of the properties of Earth materials and changing Earth systems.  Know some structure/function relationships of organ systems, recognize that some physical characteristics cannot be inherited, and explain some interrelations within ecosystems.	level demonstrate advanced knowledge of grade-level skills and content. They are most likely to:  Connect explana- tions to scientific data.  Demonstrate knowledge of conservation of mass and transfor- mation of energy; describe some properties of light; and differentiate between different types of electri- cal circuits in the physical sciences.  Explain patterns in the sun, Earth, and moon system and factors that affect the interac- tions of Earth's systems.  Compare struc- ture/function relationships among organisms, describe some external factors that affect behav- ior, link variations in appearance to survival, describe how organisms are affected by factors in the environment, and infer causes of environmental problems.  Develop complete and effective	level demonstrate extensive knowledge of grade-level skills and content. They are most likely to:  Design a multi- step investigation and communicate and justify data.  Differenti- ate forms and sources of energy, describe composi- tion and proper- ties of light, and compare and contrast electrical circuits.  Provide evidence of cyclical pat- terns in the sun, Earth, and moon system and apply knowledge of physical proper- ties of Earth mate- rials to Earth's systems.  Explain how internal factors influence behav- ior, describe how variations provide advantages in reproduction and survival, describe the interdepen- dence of organ- isms and how they relate to the environment, and evaluate how humans impact ecosystems.  Consistently develop excep- tionally thorough and effective

# Performance-level descriptors for the Delaware Student Testing Program science assessment, by grade

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
6 and 8	Students at this level demonstrate rudimentary knowledge of grade-level skills and content. They are most likely to:  • Make simple	Students at this level demonstrate basic knowledge of grade-level skills and content. They are most likely to:  Recognize a	Students at this level demonstrate acceptable knowledge of grade-level skills and content. They are most likely to:  Recognize which	Students at this level demonstrate advanced knowledge of grade-level skills and content. They are most likely to:  Use data to make	Students at this level demonstrate extensive knowledge of grade-level skills and content. They are most likely to:  Cite patterns in
	predictions and understand that graphs and charts are a source of information.  Identify three states of matter, list some forces,	scientific question, identify the variables of an experiment, and construct a graph with minimal detail.  Demonstrate some knowledge	experiment will answer a particular question, test one variable at a time, draw conclusions from data, and construct a graph that is partially correct.	predictions, generate new scientific questions using experimental results, and construct a graph correctly.  Compare the structure of solids,	data that support a given conclusion and connect explanations to scientific knowledge.  Explain how energy flows
	<ul> <li>and recognize that energy exists in different forms.</li> <li>Recognize parts of the solar system; some cyclical patterns of the Earth, moon, and sun system; and some of the components that make up Earth's systems.</li> <li>Recognize that organisms are made up of cells, recognize that living things perform similar life processes, and understand that traits are inherited.</li> <li>Provide responses that are often absent or not relevant to science concepts.</li> </ul>	some knowledge of the particulate nature of matter, energy transfor- mations, and light.  Identify some of the characteris- tics of the solar system and the effects of cyclical patterns of the Earth, moon, and sun system and recognize parts of Earth's systems.  Know some func- tions of cell struc- tures, organs, and organ systems; recognize that organisms interact with other organ- isms and their environment; and identify some ways humans affect ecosystems.  Provide responses with minimal explanation.	<ul> <li>Indicate some understanding of intrinsic and extrinsic properties, composition of mixtures, energy transfer and transformation, properties of light, and forces.</li> <li>Describe the motion of parts of the solar system; demonstrate knowledge of how the positions and motion of Earth, sun, and moon affect Earth; and describe Earth's systems, including the role of the sun.</li> <li>Describe functions of cell structures, organs, and organ systems and demonstrate understanding</li> </ul>	structure of solids, liquids, and gases and recognize how energy transfers affect structure; describe how forces are used to transfer energy; and recognize some properties of light.  Predict the motion of parts of the solar system; explain how the positions of the Earth, sun, and moon cause cyclical patterns on Earth; and apply knowledge of Earth's systems to predict change.  Describe the relationship of structure to function in life processes, differentiate between asexual reproduction, and recognize the	through a physical system and describe properties of light.  Predict global effects of interactions within the Earth, moon, and sun system and Earth.  Describe how body systems work together, explain the disadvantages and advantages and advantages of sexual and asexual reproduction, and demonstrate understanding of how organisms and their environment are interconnected.  Consistently develop exceptionally thorough and effective explanations.
			of basic genetic concepts, natural selection, and factors that affect ecosystems.  Provide partial explanations.	<ul> <li>importance of energy flow and recycling of matter for survival.</li> <li>Develop complete and effective explanations.</li> </ul>	(CONTINUED)

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# Performance-level descriptors for the Delaware Student Testing Program science assessment, by grade

Students at this level demonstrate rudimentary knowledge of grade-level skills and content. They are most likely to:  - Demonstrate part tal understanding of experimental design and graphically, and information and recognize gravity as a force.  - Recognize parts of the geosphere Identify the structure and function of some of the body systems, recognize that energy is needed for life processes, and know that genes carry traits Provide responses that are often absent or not relevant to science concepts.  - Recognize the energy tansformation and recognize the energy tansformation and person absent or not relevant to science concepts.  - Provide responses with minimal explanation.  - Provide responses with minimal explanation.  - Provide responses with minimal explanation.  - Provide responses with minimal explanation.
the application of biotechnology.

(CONTINUED)

# Performance-level descriptors for the Delaware Student Testing Program science assessment, by grade

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
11 (con- tinued)			Describe the relationships between structure and function in living things, identify the chemical reactions and energy transformations that drive life processes, recognize that some traits are inherited in predictable patterns, and recognize the role of natural selection in evolution.	Develop complete and effective explanations.	
			<ul> <li>Provide partial explanations.</li> </ul>		

TABLE D4

Performance-level descriptors for the Delaware Student Testing Program social studies assessment, by grade

Grade the standard  4 Students at this level demonstrate an undeveloped ability for their grade level	standard Students at this level demonstrate	standard Students at this	standard  Students at this level	Distinguished
demonstrate an undeveloped ability		Students at this	Caucal a mara a a a la	
to interpret, evaluate, analyze, and synthe- size information from a variety of primary and secondary social studies sources in order to demonstrate understanding of key social studies content and concepts. Such students:	a limited ability for their grade level to interpret, evaluate, analyze, and synthe- size information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and con- cepts. Such students:	level demonstrate a satisfactory ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:	Students at this level demonstrate a well developed ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:	Students at this level demonstrate a superior ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:
<ul> <li>Seldom classify, sort, or categorize in order to convert information from one form to another (for example, arranging historical materials to analyze change over time).</li> <li>Seldom construct and interpret chronologies and mental maps to situate events in time and space.</li> <li>Infrequently understand multiple causes and use information to predict likely effects.</li> <li>Infrequently analyze the reasons for differing purposes and points of view.</li> <li>Rarely assess accuracy and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.</li> </ul>	<ul> <li>Sometimes classify, sort, or categorize in order to convert information from one form to another (for example, arranging historical materials to analyze change over time).</li> <li>Sometimes construct and interpret chronologies and mental maps to situate events in time and space.</li> <li>Seldom understand multiple causes and use information to predict likely effects.</li> <li>Seldom analyze the reasons for differing purposes and points of view.</li> <li>Infrequently</li> </ul>	<ul> <li>Consistently classify, sort, or categorize in order to convert information from one form to another (for example, arranging historical materials to analyze change over time).</li> <li>Frequently construct and interpret chronologies and mental maps to situate events in time and space.</li> <li>Sometimes understand multiple causes and use information to predict likely effects.</li> <li>Seldom analyze the reasons for differing purposes and points of view.</li> <li>Infrequently assess accuracy and relevance of social studies materials in order to demonstrate understanding of key social studies content and</li> </ul>	<ul> <li>Effectively classify, sort, or categorize in order to convert information from one form to another (for example, arranging historical materials to analyze change over time).</li> <li>Consistently construct and interpret chronologies and mental maps to situate events in time and space.</li> <li>Consistently understand multiple causes and use information to predict likely effects.</li> <li>Frequently analyze the reasons for differing purposes and points of view.</li> <li>Sometimes assess accuracy and relevance of social studies materials in order to demonstrate understanding of key social studies content and</li> </ul>	<ul> <li>Skillfully classify, sort, or categorize in order to convert information from one form to another (for example, arranging historical materials to analyze change over time).</li> <li>Effectively construct and interpret chronologies and mental maps to situate events in time and space.</li> <li>Effectively understand multiple causes and use information to predict likely effects.</li> <li>Consistently analyze the reasons for differing purposes and points of view.</li> <li>Frequently assess accuracy and relevance of social studies materials in order to demonstrate understanding of key social studies content and</li> </ul>

(CONTINUED)

	Well below	Below the	Meets the	Exceeds the	
Grade	the standard	standard	standard	standard	Distinguished
4 (con- tinued)	Students at this level also demonstrate an undeveloped ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a limited ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a satisfactory ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a well developed ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a superior ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:
	<ul> <li>Seldom use         content-appropriate vocabulary in         order to communicate understanding of key content         and concepts of         the distinct social         studies disciplines</li> <li>Seldom use social         studies materials         and knowledge as         evidence to solve         problems and to         make and support         reasoned decisions, explanations, conclusions,         or predictions.</li> <li>Infrequently         explain the         reasoning used in         making decisions         or predictions,         solving problems,         and drawing         conclusions.</li> <li>Infrequently         analyze similarities, differences,         patterns, and         relationships to         explain key social         studies content         and concepts.</li> </ul>	<ul> <li>Sometimes use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines</li> <li>Sometimes use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Seldom explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> <li>Infrequently analyze similarities, differences, patterns, and relationships to explain key social studies content and concepts.</li> </ul>	<ul> <li>Consistently use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.</li> <li>Frequently use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Sometimes explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> <li>Seldom analyze similarities, differences, patterns, and relationships to explain key social studies content and concepts.</li> </ul>	<ul> <li>Effectively use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.</li> <li>Consistently use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Consistently explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> <li>Frequently analyze similarities, differences, patterns, and relationships to explain key social studies content and concepts.</li> </ul>	<ul> <li>Skillfully use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.</li> <li>Effectively use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Effectively explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> <li>Consistently analyze similarities, differences, patterns, and relationships to explain key social studies content and concepts.</li> </ul>

Well below Grade the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
4 (con- • Rarely make connections within the social studies disciplines to develop a reasoned explanation (for example, understanding that the supply and demand of goods and services [economics] can be influenced by government tax policy [civics]).	Rarely make connections within and between the social studies disciplines to develop a reasoned explanation (for example, understanding that the supply and demand of goods and services [economics] can be influenced by government tax policy [civics]).	• Infrequently make connections within and between the social studies disciplines to develop a reasoned explanation (for example, understanding that the supply and demand of goods and services [economics] can be influenced by government tax policy [civics]).	Sometimes make connections within and between the social studies disciplines to develop a reasoned explanation (for example, understanding that the supply and demand of goods and services [economics] can be influenced by government tax policy [civics]).	Frequently make connections within and between the social studies disciplines to develop a reasoned explanation (for example, understanding that the supply and demand of goods and services [economics] can be influenced by government tax policy [civics]).

# Performance-level descriptors for the Delaware Student Testing Program social studies assessment, by grade

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
6 and 8	Students at this level demonstrate an undeveloped ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:	Students at this level demonstrate a limited ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:	Students at this level demonstrate a satisfactory ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:	Students at this level demonstrate a well developed ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:	Students at this level demonstrate a superior ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:
	<ul> <li>Seldom classify, sort, or categorize in order to convert information from one form to another (for example, using graphs or maps to analyze change over time or to explain patterns).</li> <li>Seldom construct and interpret</li> </ul>	Sometimes classify, sort, or categorize in order to convert information from one form to another (for example, using graphs or maps to analyze change over time or to explain patterns).      Sometimes construct and inter-	<ul> <li>Consistently classify, sort, or categorize in order to convert information from one form to another (for example, using graphs or maps to analyze change over time or to explain patterns).</li> <li>Frequently construct and inter-</li> </ul>	<ul> <li>Effectively classify, sort, or categorize in order to convert information from one form to another (for example, using graphs or maps to analyze change over time or to explain patterns).</li> <li>Consistently construct and inter-</li> </ul>	<ul> <li>Skillfully classify, sort, or categorize in order to convert information from one form to another (for example, using graphs or maps to analyze change over time or to explain patterns).</li> <li>Effectively con- struct and inter-</li> </ul>
	chronologies and mental maps to situate events in time and space.	pret chronologies and mental maps to situate events in time and space.	pret chronologies and mental maps to situate events in time and space.	pret chronologies and mental maps to situate events in time and space.	pret chronologies and mental maps to situate events in time and space.
	<ul> <li>Infrequently inter- pret the impact of multiple causes and use informa- tion to predict likely effects.</li> </ul>	<ul> <li>Seldom interpret the impact of mul- tiple causes and use information to predict likely effects.</li> </ul>	<ul> <li>Sometimes interpret the impact of multiple causes and use information to predict likely effects.</li> </ul>	<ul> <li>Consistently interpret the impact of multiple causes and use information to predict likely effects.</li> </ul>	Effectively interpret the impact of multiple causes and use information to predict likely effects.
	<ul> <li>Infrequently analyze the reasons for differing purposes, perspectives, and points of view.</li> </ul>	<ul> <li>Seldom analyze the reasons for dif- fering purposes, perspectives, and points of view.</li> </ul>	<ul> <li>Seldom analyze the reasons for dif- fering purposes, perspectives, and points of view.</li> </ul>	<ul> <li>Frequently analyze the reasons for differing purposes, perspectives, and points of view.</li> </ul>	<ul> <li>Consistently analyze the reasons for differing purposes, perspectives, and points of view.</li> </ul>
	Rarely assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.	Infrequently assess accuracy, credibil- ity, and relevance of social studies materials in order to demonstrate understanding of key social stud- ies content and concepts.	Infrequently assess accuracy, credibil- ity, and relevance of social studies materials in order to demonstrate understanding of key social stud- ies content and concepts.	Sometimes assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.	Frequently assess accuracy, credibility, and relevance of social studies material in order to demonstrate understanding of key social studies content and concepts.  (CONTINUED)

(CONTINUED)

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
6 and 8 (con- tinued)	Students at this level also demonstrate an undeveloped ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a limited ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a satisfactory ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a well developed ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:	Students at this level also demonstrate a superior ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:
	Seldom use content-appropri- ate vocabulary in order to communi- cate understand- ing of key content and concepts of the distinct social studies disciplines.	Sometimes use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.	Consistently use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.	Effectively use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.	Skillfully use content-appropri- ate vocabulary in order to communi- cate understand- ing of key content and concepts of the distinct social studies disciplines.
	Seldom use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.      Infrequently	Sometimes use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.	<ul> <li>Frequently use social studies materials and knowledge as evidence to solve problems and to make and support reasoned deci- sions, explana- tions, conclusions, or predictions.</li> </ul>	Consistently use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.	Effectively use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.
	explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.  Infrequently analyze similari-	Seldom explain the reasoning used in mak- ing decisions or predictions, solving problems, and drawing conclusions.	Sometimes explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.	Consistently explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.	<ul> <li>Effectively explain the reasoning used in mak- ing decisions or predictions, solving problems, and drawing conclusions.</li> <li>Consistently</li> </ul>
	ties, differences, patterns, and relationships to explain key social studies content and concepts.	<ul> <li>Infrequently analyze similari- ties, differences, patterns, and relationships to explain key social studies content and concepts.</li> </ul>	Seldom analyze similarities, differ- ences, patterns, and relationships to explain key social studies con- tent and concepts.	Frequently analyze similarities, differences, patterns, and relationships to explain key social studies content and concepts.	analyze similarities, differences, patterns, and relationships to explain key social studies content and concepts.

Well below Grade the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
6 and • Rarely make connections within and between the social studies disciplines to develop a reasoned explanation (for example, explaining how or why the location of economic activities [geography] can be influenced by law and regulations [civics]).	tion (for example, explaining how or why the location of economic activities [geography] can be	• Infrequently make connections within and between the social studies disciplines to develop a reasoned explanation (for example, explaining how or why the location of economic activities [geography] can be influenced by laws and regulations [civics]).	Sometimes make connections within and between the social studies disciplines to develop a reasoned explanation (for example, explaining how or why the location of economic activities [geography] can be influenced by laws and regulations [civics]).	• Frequently make connections within and between the social studies disciplines to develop a reasoned explanation (for example, explaining how or why the location of economic activities [geography] can be influenced by laws and regulations [civics]).

undeveloped ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate understanding of sey social studies order to demonstrate and concepts. Such students:  Seldom classify, sort, or categorize in order to categorize in order to categorize in order to convert information from one form to another (for example, analyze, land space.)  Seldom construct and interpret to another (for example, analyze).  Seldom construct and interpret tevaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies order to demonstrate and understanding of key social studies orders in order to demonstrate and understanding of key social studies orders in order to demonstrate and understanding of key social studies orders in order to demonstrate and understanding of key social studies orders in order to demonstrate order to demonstrate order to demonstrate orders.  Seldom classify, sort, or categorize in order to demonstrate orders to demonstrate orders to demonstrate orders. Such students:  Seldom classify, sort,	Well below Grade the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
to distinguish of view in order of view in order to distinguish to distinguish	Students at this level demonstrate an undeveloped ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate understanding of key social studies content and concepts. Such students:  • Seldom classify, sort, or categorize in order to convert information from one form to another (for example, analyze historical materials to explain patterns of continuity and change).  • Seldom construct and interpret chronologies and mental maps to situate events in time and space.  • Infrequently interpret the impact of multiple causes and use information to predict likely effects.  • Infrequently analyze the reasons for differing purposes, perspectives, and points	Students at this level demonstrate a limited ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:  Sometimes classify, sort, or categorize in order to convert information from one form to another (for example, analyze historical materials to explain patterns of continuity and change).  Sometimes construct and interpret chronologies and mental maps to situate events in time and space.  Seldom interpret the impact of multiple causes and use information to predict likely effects.  Seldom analyze the reasons for differing purposes, perspec-	Students at this level demonstrate a satisfactory ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:  Consistently classify, sort, or categorize in order to convert information from one form to another (for example, analyze historical materials to explain patterns of continuity and change).  Frequently construct and interpret chronologies and mental maps to situate events in time and space.  Sometimes interpret the impact of multiple causes and use information to predict likely effects.  Seldom analyze the reasons for differing purposes, perspec-	Students at this level demonstrate a well developed ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:  • Effectively classify, sort, or categorize in order to convert information from one form to another (for example, analyze historical materials to explain patterns of continuity and change).  • Consistently construct and interpret chronologies and mental maps to situate events in time and space.  • Consistently interpret the impact of multiple causes and use information to predict likely effects.  • Frequently analyze the reasons for differing purposes, perspectives, and points	Students at this level demonstrate a superior ability for their grade level to interpret, evaluate, analyze, and synthesize information from a variety of primary and secondary social studies sources in order to demonstrate an understanding of key social studies content and concepts. Such students:  Skillfully classify, sort, or categorize in order to convert information from one form to another (for example, analyze historical materials to explain patterns of continuity and change).  Effectively construct and interpret chronologies and mental maps to situate events in time and space.  Effectively interpret the impact of multiple causes and use information to predict likely effects.  Consistently analyze the reasons for differing purposes, perspectives, and points
interpretations. between facts and between facts and interpretations. interpretations. interpretations.	to distinguish between facts and	of view in order to distinguish between facts and	of view in order to distinguish between facts and	to distinguish between facts and	between facts and

# Performance-level descriptors for the Delaware Student Testing Program social studies assessment, by grade

Pertorn	nance-ievei descript	ors for the Delaware	Student Testing Prog	gram social studies as	ssessment, by grade
	Well below	Below the	Meets the	Exceeds the	
Grade	the standard	standard	standard	standard	Distinguished
11 (continued)	<ul> <li>Rarely develop a strategy to assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.</li> <li>Students at this level also demonstrate an undeveloped ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:         <ul> <li>Seldom use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.</li> <li>Seldom use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Infrequently explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> </ul> </li> </ul>	<ul> <li>Infrequently develop a strategy to assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.</li> <li>Students at this level also demonstrate a limited ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:         <ul> <li>Sometimes use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.</li> <li>Sometimes use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Seldom explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> </ul> </li> </ul>	<ul> <li>Infrequently develop a strategy to assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.</li> <li>Students at this level also demonstrate a satisfactory ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:</li> <li>Consistently use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.</li> <li>Frequently use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.</li> <li>Sometimes explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.</li> </ul>	Sometimes develop a strategy to assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.  Students at this level also demonstrate a well developed ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:  Effectively use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.  Consistently use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.  Consistently explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.	• Frequently develop a strategy to assess accuracy, credibility, and relevance of social studies materials in order to demonstrate understanding of key social studies content and concepts.  Students at this level also demonstrate a superior ability for their grade level to apply social studies content and concepts to real-life situations by transferring knowledge from the abstract to the concrete level. Such students:  • Skillfully use content-appropriate vocabulary in order to communicate understanding of key content and concepts of the distinct social studies disciplines.  • Effectively use social studies materials and knowledge as evidence to solve problems and to make and support reasoned decisions, explanations, conclusions, or predictions.  • Effectively explain the reasoning used in making decisions or predictions, solving problems, and drawing conclusions.
					(CONTINUED)

(CONTINUED)

irade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
1 con- inued)	<ul> <li>Infrequently analyze similari- ties, differences, patterns, and relationships to apply and to explain key social studies content and concepts.</li> </ul>	<ul> <li>Infrequently analyze similari- ties, differences, patterns, and relationships to apply and to explain key social studies content and concepts.</li> </ul>	<ul> <li>Seldom analyze similarities, differences, patterns, and relationships to apply and to explain key social studies content and concepts.</li> <li>Infrequently</li> </ul>	<ul> <li>Frequently analyze similari- ties, differences, patterns, and relationships to apply and to explain key social studies content and concepts.</li> </ul>	<ul> <li>Consistently analyze similari- ties, differences, patterns, and relationships to apply and to explain key socia studies content and concepts.</li> </ul>
	• Rarely make connections within and between the social studies disciplines to develop a reasoned explanation (for example, analyzing how or why the structure of a government [civics] can be influenced by a nation's distinctive culture [geography]).	<ul> <li>Rarely make connections within and between the social studies disciplines to develop a reasoned explanation (for example, analyzing how or why the structure of a government [civics] can be influenced by a nation's distinctive culture [geography]).</li> </ul>	make connections within and between the social studies disciplines to develop a reasoned explanation (for example, analyzing how or why the structure of a government [civics] can be influenced by a nation's distinctive culture [geography]).	Sometimes make connections within and between the social studies disciplines to develop a reasoned explanation (for example, analyzing how or why the structure of a government [civics] can be influenced by a nation's distinctive culture [geography]).	• Frequently make connections within and between the social studies disciplines to develop a reasoned explanation (for example analyzing how or why the structure of a government [civics] can be influenced by a nation's distinctive culture [geography]).

# APPENDIX E SCORE RANGES OF THE DELAWARE STUDENT TESTING PROGRAM

This appendix provides information on the score ranges used to categorize student achievement into well below the standard, below the standard, meets the standard, exceeds the standard, and distinguished on the Delaware Student Testing Program.

TABLE E1 **Delaware Student Testing Program reading score ranges, by grade** 

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
2	na	360 or less	361–418	419 or more	na
3	386 or less	387–414	415–465	466-481	482 or more
4	413 or less	414–436	437–482	483–502	503 or more
5	426 or less	427–452	453–501	502–528	529 or more
6	434 or less	435–459	460–503	504–541	542 or more
7	437 or less	438-464	465–522	523–556	557 or more
8	465 or less	466-494	495–552	553-583	584 or more
9	467 or less	468–497	498–577	558–585	586 or more
10	469 or less	470–500	501–561	562–587	588 or more

na is not applicable because grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard. *Source*: Delaware Department of Education 2010.

TABLE E2 **Delaware Student Testing Program math score ranges, by grade** 

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
2	na	350 or less	351–403	404 or more	na
3	380 or less	381–406	407–460	461–498	499 or more
4	407 or less	408-431	432–476	477–504	505 or more
5	432 or less	433-450	451–504	505–527	528 or more
6	450 or less	451–465	466–517	518-538	539 or more
7	458 or less	459–471	472–519	520-542	543 or more
8	468 or less	469-486	487–526	527–548	549 or more
9	485 or less	486-513	514–553	554–569	570 or more
10	505 or less	506-522	523–558	559–577	578 or more

na is not applicable because grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard. Source: Delaware Department of Education 2010.

TABLE E3

Delaware Student Testing Program science score ranges, by grade

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
4	Below 286	286–299	300-324	325-335	Above 335
6	Below 285	285–299	300-324	325-334	Above 334
8	Below 280	280–299	300-324	325–337	Above 337
11	Below 282	282–299	300-324	325-334	Above 334

Source: Delaware Department of Education 2010.

TABLE E4 **Delaware Student Testing Program social studies score ranges, by grade** 

Grade	Well below the standard	Below the standard	Meets the standard	Exceeds the standard	Distinguished
4	Below 285	285–299	300-324	325–336	Above 336
6	Below 286	286–299	300-324	325-334	Above 334
8	Below 282	282–299	300-324	325-334	Above 334
11	Below 276	276–299	300-324	325–336	Above 336

# APPENDIX F PERCENTAGE OF STUDENTS SCORING AT THE MEETS THE STANDARD, EXCEEDS THE STANDARD, OR DISTINGUISHED LEVEL IN DELAWARE'S ASSESSMENT PROGRAM

This appendix provides information on the percentage of students scoring at meets the standard, exceeds the standard, or distinguished in the Delaware Student Testing Program.

#### TABLE F1

Percentage of students scoring at the meets the standard or exceeds the standard level on the grade 2 Delaware Student Testing Program, by subject and English language learner status, 2005/06–2008/09

Subject and English language learner status	2005/06	2006/07	2007/08	2008/09
Reading				
Non-ELL	83.6	82.5	85.1	85.0
ELL	83.6	80.9	81.3	82.4
Math				
Non-ELL	87.8	85.5	86.6	87.5
ELL	90.1	85.3	85.9	86.7

ELL is English language learner.

Note: Grade 2 assessments use only three proficiency levels: below the standard, meets the standard, and exceeds the standard.

Source: Delaware Department of Education 2009a.

#### TABLE F2

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 3 Delaware Student Testing Program, by subject and English language learner status, 2005/06–2008/09

Subject and English language learner status	2005/06	2006/07	2007/08	2008/09
Reading				
Non-ELL	84.2	81.4	81.8	81.4
ELL	75.0	82.4	80.6	81.6
Math				
Non-ELL	78.7	77.6	77.5	78.4
ELL	60.1	74.0	75.6	79.3

ELL is English language learner.

TABLE F3

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 4 Delaware Student Testing Program, by subject and English language learner status, 2002/03–2008/09

Subject and English language learner status	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Reading							
Non-ELL	na	na	na	82.3	82.7	81.7	81.8
ELL	na	na	na	50.4	72.4	74.9	80.1
Math							
Non-ELL	na	na	na	78.7	76.4	77.4	77.3
ELL	na	na	na	43.9	60.9	72.4	71.7
Science							
Non-ELL	89.9	89.0	91.0	92.9	91.8	93.1	91.9
ELL	78.7	74.3	71.1	76.4	81.6	89.8	88.1
Social studies							
Non-ELL	59.5	68.8	69.9	65.9	70.7	69.1	70.1
ELL	36.8	42.4	40.7	32.5	47.4	55.2	64.4

ELL is English language learner.

na is not applicable because the grade 4 assessment in reading and math was changed in 2005/06, and thus results from 2005/06 onward are not comparable to results prior to 2005/06.

Source: Delaware Department of Education 2009a.

TARI F F4

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 5 Delaware Student Testing Program, by subject and English language learner status, 2005/06–2008/09

Subject and English language learner status	2005/06	2006/07	2007/08	2008/09
Reading				
Non-ELL	85.0	85.0	86.4	85.3
ELL	44.7	70.3	78.8	82.2
Math				
Non-ELL	77.3	76.8	76.9	77.3
ELL	51.9	59.9	67.4	75.9

ELL is English language learner.

TABLE F5

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 6 Delaware Student Testing Program, by subject and English language learner status, 2002/03–2008/09

Subject and English language learner status	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Reading							
Non-ELL	na	na	na	82.1	80.8	81.5	83.1
ELL	na	na	na	60.0	53.4	65.6	68.6
Math							
Non-ELL	na	na	na	72.0	74.1	75.0	75.4
ELL	na	na	na	37.4	58.6	67.6	61.4
Science							
Non-ELL	74.4	74.7	76.3	80.6	78.8	80.4	78.7
ELL	39.2	46.1	40.5	49.7	52.5	67.1	57.3
Social studies							
Non-ELL	63.9	58.6	57.8	60.6	61.4	66.2	66.6
ELL	32.5	28.3	26.7	28.9	36.4	41.3	44.0

ELL is English language learner.

na is not applicable because the grade 6 assessment in reading and math was changed in 2005/06, and thus results from 2005/06 onward are not comparable to results prior to 2005/06.

Source: Delaware Department of Education 2009a.

TARLE F6

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 7 Delaware Student Testing Program, by subject and English language learner status, 2005/06–2008/09

Subject and English language learner status	2005/06	2006/07	2007/08	2008/09
Reading				
Non-ELL	83.6	84.7	85.4	87.4
ELL	40.9	61.9	61.4	77.7
Math				
Non-ELL	65.6	66.1	68.8	71.1
ELL	24.6	38.7	47.5	57.0

ELL is English language learner.

#### TABLE F7

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 8 Delaware Student Testing Program, by subject and English language learner status, 2002/03–2008/09

Subject and English language learner status	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Reading							
Non-ELL	na	na	na	83.9	82.3	81.3	81.7
ELL	na	na	na	48.4	43.0	55.9	58.5
Math							
Non-ELL	na	na	na	62.7	61.8	65.4	66.3
ELL	na	na	na	30.9	22.1	43.5	48.3
Science							
Non-ELL	49.3	50.7	53.5	54.4	59.0	56.1	60.4
ELL	13.9	5.9	12.8	10.7	16.3	24.5	24.6
Social studies							
Non-ELL	47.0	47.8	54.8	51.0	50.9	52.7	55.9
ELL	15.0	7.1	19.2	19.3	17.5	25.3	26.5

ELL is English language learner.

na is not applicable because the grade 8 assessment in reading and math was changed in 2005/06, and thus results from 2005/06 onward are not comparable to results prior to 2005/06.

Source: Delaware Department of Education 2009a.

#### TARI F F8

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 9 Delaware Student Testing Program, by subject and English language learner status, 2005/06–2008/09

Subject and English language learner status	2005/06	2006/07	2007/08	2008/09
Reading				
Non-ELL	75.4	74.9	76.1	74.2
ELL	39.5	37.0	40.6	50.3
Math				
Non-ELL	51.5	51.2	54.0	55.3
ELL	28.6	30.5	28.9	31.5

ELL is English language learner.

TABLE F9

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 10 Delaware Student Testing Program, by subject and English language learner status, 2005/06–2008/09

Subject and English language learner status	2005/06	2006/07	2007/08	2008/09
Reading				
Non-ELL	71.0	73.2	71.4	71.6
ELL	25.0	27.8	32.9	34.6
Math				
Non-ELL	59.2	57.1	58.2	57.0
ELL	33.3	37.9	38.7	29.6

ELL is English language learner.

Source: Delaware Department of Education 2009a.

#### TABLE F10

Percentage of students scoring at the meets the standard, exceeds the standard, or distinguished level on the grade 11 Delaware Student Testing Program, by subject and English language learner status, 2002/03–2008/09

Subject and English language learner status	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Science							
Non-ELL	51.7	54.0	59.0	61.1	65.4	61.3	60.4
ELL	23.8	10.0	23.5	32.4	23.7	33.6	28.5
Social studies							
Non-ELL	49.0	45.9	53.3	51.4	53.7	45.0	46.9
ELL	26.9	16.1	25.0	18.8	21.1	22.4	21.3

ELL is English language learner.

#### **NOTES**

- 1. Students whose first language is not English and who are in the process of learning English are referred to using different terms across the United States, such as English language learner (ELL) or limited English proficient (LEP) students. The authors refer to such students as ELL students in the present report to remain consistent with Delaware terminology.
- 2. The request came to *Ask A REL*, which is a collaborative reference desk service of the 10 Regional Educational Laboratories that provides references, referrals, and brief responses in the form of citations on research-based education questions. More information can be found at http://ies.ed.gov/ncee/edlabs/askarel/index.asp.
- 3. The reasons for the large increase in ELL student enrollment from 2002/03 to 2003/04 and from 2004/05 to 2005/06 are unknown to the study authors.
- 4. Prior to 2005/06, Delaware used the Language Assessment Scales to assess English language proficiency.
- 5. The reason for the large increase in the number of languages spoken by ELL students from 2007/08 to 2008/09 is unknown to the study authors.
- 6. The reason for the large increase in the number of ELL students speaking Spanish from 2005/06 to 2006/07 is unknown to the study authors.
- 7. The reason for the large increase in ELL students' performance on the grade 4 reading assessment from 2005/06 to 2006/07 is unknown to the study authors.
- 8. The reason for the large increase in ELL students' performance on the grade 5 reading

- assessment from 2005/06 to 2006/07 is unknown to the study authors.
- 9. The reason for the large increase in ELL students' performance on the grade 7 reading assessment from 2005/06 to 2006/07 and from 2007/08 to 2008/09 is unknown to the study authors.
- 10. The reason for the large increase in ELL students' performance on the grade 3 math assessment from 2005/06 to 2006/07 is unknown to the study authors.
- 11. The reason for the large increase in ELL students' performance on the grade 4 math assessment from 2005/06 to 2007/08 is unknown to the study authors.
- 12. The reason for the large increase in ELL students' performance on the grade 6 math assessment from 2005/06 to 2007/08 is unknown to the study authors.
- 13. The reason for the large increase in ELL students' performance on the grade 8 math assessment from 2006/07 to 2007/08 is unknown to the study authors.
- 14. In May 2005, the Delaware Department of Education conducted alignment studies to determine the extent to which the DSTP measures the content standards and the newly developed grade-level expectations. A panel comprised of educators and policymakers in the state evaluated whether the assessment items attributed to the performance level were appropriate and whether the score ranges were well aligned to the expectations specified in the content standards, grade-level expectations, and performance-level descriptors for each grade. The panel recommended new score ranges based on its findings.

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